Report of the Meat Regulatory and Inspection Review

FARM TO FORK

A STRATEGY FOR MEAT SAFETY IN ONTARIO

The Honourable Roland J. Haines

Ontario

THE MEAT INSPECTION REVIEW
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July 21, 2004

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Dear Mr. Attorney:

With this letter I transmit the Report of the Meat Regulatory and Inspection Review.

Yours very truly,

J. Haines

Roland J. Haines
Reviewer

Encl.

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Executive Summary

Chapter 1 - Introduction

On January 9, 2004, I was authorized to review the meat[1] regulatory and inspection regimes in Ontario. The mandate I was given required a review of existing regulatory standards and the roles of various ministries that are responsible for overseeing adherence to those standards. The stated purpose for the review is to strengthen public health and safety and business confidence. To this end, I have been asked to make recommendations on approaches that can be undertaken by the government of Ontario to improve the current system, including strategies for accelerating harmonization with the federal government.

This review comes at a time when there are elevated concerns for public health arising out of the findings of the Walkerton Inquiry and, more recently, the several reports which have addressed the systemic problems exposed by the SARS crisis in 2003. Thankfully, there is no equivalent precipitating event for this review but certain events of the past year, including the discovery of bovine spongiform encephalopathy (BSE) in Canada and allegations of illegal activities at certain provincial abattoirs, have focussed the attention of the media and the public on the issue of meat safety in Ontario.

Chapter 2 - Current Structure of Meat Regulation in Ontario

The delivery of safe meat in Ontario is a responsibility that is shared by the federal and provincial governments. There is no specific legislative power allocated to either level of government for meat inspection, however, both have concurrent jurisdiction over agriculture pursuant to the provisions of the *Constitution Act, 1867*.

Federal participation arises principally from its constitutional responsibility for interprovincial and international trade. Any abattoir or meat processing facility in Ontario that wishes to trade beyond provincial borders must be registered in the federal system and conduct its business in accordance with federal regulations.

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[1] Whenever "meat" is referred to in this report, it means meat from a domestic animal which is intended for human consumption and includes "poultry" which means chickens, turkeys, ducks, geese and other birds.

At the federal level, meat inspection has been undertaken by the Canadian Food Inspection Agency (CFIA) since 1997. At that time, the government of Canada integrated the delivery of inspection and quarantine services. The CFIA ensures that manufacturers, importers, distributors and producers comply with federal regulations and standards governing the safety, quality, handling, identification, processing, packaging and labelling of food. The Minister of Health continues to establish policies and standards for the safety and nutritional quality of food sold in Canada.

The province of Ontario regulates meat that is processed in Ontario for sale and consumption within its boundaries. There are currently 191 provincially licensed abattoirs in Ontario. Several provincial ministries have responsibilities for administering a substantial body of legislation that addresses food safety in Ontario. The Ministry of Agriculture and Food (OMAF) is currently the principal participant in the regulation of meat production. The Director of the Food Inspection Branch is responsible for administering the meat inspection program under the *Meat Inspection Act* (Ontario) (*MIA*) which is intended to provide for production of safe meat for human consumption, under proper conditions, in appropriately designed and maintained facilities.

The Ministry of Health and Long-Term Care (MOHLTC) administers the *Health Protection and Promotion Act (HPPA)*. This legislation provides for the organization and delivery of public health programs and services, the prevention of the spread of disease and the promotion and protection of the health of the people of Ontario.

There are 37 health units in Ontario. A health unit is a geographic area over which a Board of Health has jurisdiction. Under the provisions of the *HPPA*, the Minister of Health establishes mandatory health programs and services that every Board of Health is required to provide. Each Board of Health is supervised by a medical officer of health (MOH). In the normal course, the inspection of food premises within each health unit is undertaken by public health inspectors under the direction of the MOH. Food premises has an expansive definition and includes all premises where food is manufactured, processed, prepared, stored or offered for sale except a private residence. Facilities that are currently subject to such inspections include traditional butcher shops, restaurants, supermarkets, variety stores and premises outside of abattoirs where ready-to-eat meats are cured, smoked or fermented that are referred to as free standing meat processors.

The Ministry of Natural Resources (MNR) has responsibility under the *Fish Inspection Act* (Ontario) (*FIA*) to regulate the commercial sale and processing of fish intended for human consumption. The MNR also plays an important role in the enforcement of certain legislation administered by OMAF through an agreement between the two ministries. Under the terms of that arrangement, the MNR provides investigative services and resources for the prosecution of offenders who contravene the regulations relating to meat production and the disposal of dead animals.

The Ontario Food Safety Strategy (OFSS) was launched in October 2000 following a review of Ontario's food safety system that commenced in 1998. At that time, it was acknowledged that food safety hazards and risks were increasing for a variety of reasons and while food science was responding to meet these challenges, there were elements of Ontario's food safety system that were not keeping pace with national and international inspection standards. Subsequent to an extensive consultative process, the Legislature enacted the *Food Safety and Quality Act, 2001* (*FSQA*) on December 5, 2001. The purpose of the *FSQA* was to modernize the food safety and quality features of several existing statutes to provide a framework for the implementation of food safety inspection programs that will complement and support the food safety programs provided by the CFIA and local Boards of Health. Unfortunately, the *FSQA* has not yet been proclaimed and is, therefore, not in force.

Chapter 3 - A Science-Based Approach to Food Safety

There are a number of benefits to a science-based approach. Science is not just about what we know; it is also a way of approaching problems. It involves making observations and testing predictions made on the basis of verified information.

In developing a public policy framework for a food safety program, it is expected that the best available scientific knowledge and technology will be used to identify and characterize the food safety risks and the options available to reduce them. While science is an important element in developing food safety policy, it is not the only consideration. Social values, ethics, consumer demands, economic and political considerations will all impact these policy decisions.

The development, implementation and operation of an effective science-based food safety program is complex. First, it must encompass all aspects of the food production continuum from production to consumption. Hence, the use of such descriptive phrases as "farm to fork." Second, such a system relies upon the participation of all stakeholders including governments, primary and secondary producers, retailers and consumers.

Needless to say, the principal reason for having any food safety system is to ensure that the food consumed by the public is safe in that it will not cause harm to health. The information and advice I have garnered during the course of this Review leads me to conclude that the meat produced and consumed in Ontario is, for the most part, safe and free of hazardous contaminants. However, foodborne illness remains a significant public health issue in Ontario.

It is difficult to measure the true extent of foodborne illness since the symptoms are often similar to other common ailments and often last for no more than a day or two. One recent report estimates that there are over 300,000 cases of foodborne illness in Ontario each year with 60,000 of those related to the consumption of meat and poultry products. While many foodborne illnesses result in only short-term discomfort, they can result in serious, permanent, physical injury and even death, particularly in vulnerable groups such as young children and the elderly.

Foodborne illness is caused as a result of the consumption of or contact with food that has been contaminated with some type of microbiological, biological, chemical or physical hazard. Meat can become contaminated in many different ways. Microbial agents capable of infecting people and causing illness can occur naturally in the environment or in animals. Some of these agents can cause animals to become ill whereas others can be found in healthy animals. Diseases which can be transmitted from animals to humans are called zoonotic diseases. Approximately one-half of known infectious microbial agents can be transmitted from animals to humans. Of concern are new, emerging, infectious diseases, many of which are zoonotic, involving newly identified pathogens such as West Nile virus, avian influenza and SARS.

Hazard Analysis Critical Control Points (HACCP) is a science-based system that is designed to detect potential hazards before they occur and to allow for implementation of control measures to reduce or eliminate the likelihood of their occurrence. HACCP-based programs are important because, while meat inspection and testing is significant, there is no amount of inspection or testing that is capable of eliminating all hazards. HACCP is established worldwide as the foremost means of ensuring food safety throughout the food chain. Although there is currently no mandatory HACCP food safety program required provincially, OMAF has developed the voluntary HACCP Advantage Program for provincially licensed abattoirs.

Food safety systems must be firmly based on sound science to protect public health and maintain consumer and business confidence. I am convinced that a HACCP-based food safety program is a principal building block in any such structure.

An ideal food safety system has an infrastructure to trace the origins and destination of whole and processed food and their inputs. Traceability refers to the implementation of measures to ensure that, at any stage of the food chain, the path of a food item and the relevant information about it are known. Such a system is critical for disease control in the event of an outbreak or emergency food recall. While Ontario has no formal traceability program, OMAF is working toward such a program and has been supportive of various national traceability initiatives. These initiatives need to be supported, pursued and ultimately implemented.

Biosecurity in food and agriculture encompasses all policy and regulatory frameworks that manage risks associated with food safety, animal life and health, and plant life and health. It applies to food production and addresses the deliberate or inadvertent introduction of pests and diseases. The purpose of biosecurity measures is to prevent the spread of disease from one location to another and usually involves cleaning and disinfection procedures for equipment, animals and humans. A provincial biosecurity strategy is needed.

The surveillance of foodborne disease is also an important component of any food safety program. In the context of public health, surveillance is the ongoing, systematic collection, analysis, interpretation and dissemination of data regarding a health related event to reduce morbidity and mortality and to improve health. A good foodborne disease surveillance system requires surveillance of animal health, food hazards and foodborne illnesses. When integrated and reviewed on a regular basis, the data can provide useful insights into the sources and pathways of pathogens in the food chain. Surveillance does not prevent outbreaks, but early identification is essential for the investigation and efficient management of them. Since effective surveillance requires the timely collection and transmission of information, reliable information systems that are accessible to all relevant agencies are critical.

Chapter 4 - Farm Livestock Production

The farm to fork continuum begins at the farm. Animals processed in provincially licensed abattoirs and meat-processing plants in Ontario are primarily raised on Ontario livestock farms. Although the scale and intensity of farming has increased over the years, there is still a wide range of farm sizes and types in Ontario. They range from large feed and grow operations involving hundreds or even thousands of animals to small farms with only a few animals raised for local markets or personal consumption. There are approximately 30,000 farms with livestock in Ontario.

Livestock produced in Ontario includes beef, dairy, sheep, hogs, poultry and goats, as well as domestic bison, deer, elk and other specialty animals. Since foodborne contaminants cannot be inspected out at slaughter or at any other single point in food production or processing, quality and safety must be built into the process from the beginning. It is easier to keep safe an already safe product.

For the most part, farmers' production methods are designed to raise and sell healthy animals, but there are a number of food hazards that can arise at farms. The main hazards are animal diseases or pathogens that may be transmitted to humans through the meat produced from an infected animal. Other risks relate to production practices that may leave residues of drugs, hormones or other chemicals, or physical elements, such as broken needles or splinters, in animals that could cause harm to the consumer. Also, direct sales of farm products from farmers to consumers give rise to the same risks that exist in any other food premises.

At present, there is very little in the way of legislation or regulation directed to the protection of food safety at the farm stage of the continuum. Farms are not generally licensed, nor is there a mandatory broad-based inspection program concerning on-farm food safety. Although there are reporting requirements for certain diseases, regulations governing animal transport, and restrictions on feeding certain products or using certain medications, the system is not well designed to enforce these requirements and primarily relies on voluntary compliance.

While I am encouraged by recent initiatives and proposed plans, there are compelling reasons, for meat safety, to require that all farms adhere to certain standards and not rely on the voluntary approach. Those who choose not to participate are likely those who represent the greater risk. For the food safety system to provide the best protection, there must be full participation. The development of mandatory approaches will require cooperation and leadership by all stakeholders and a supportive regulatory framework to provide adequate training and enforcement. I believe it is possible to address many of the on-farm food safety issues through a comprehensive on-farm food safety framework administered by OMAF.

Notwithstanding the provisions of the *MIA* that require the inspection of all livestock that is slaughtered for the purpose of processing meat into food for human consumption, producers of livestock are permitted to slaughter their own animals, on their own premises, for consumption by themselves and their immediate family. Although this represents a very small portion of the total volume of meat produced for human consumption, this exemption engages the same animal welfare and food safety concerns that arise with illegal slaughter.

Currently, there are no regulations or standards. I presume the governing assumption is that the producers will take the necessary steps to ensure the meat is safe because the health of themselves and their families is at stake. Unfortunately, inherent in that proposition is the further assumption that the producer has the necessary knowledge and equipment to produce wholesome meat. In many cases this may be so, but the consequences of ignorance in the production of meat can be serious.

In my opinion, the elimination of uninspected slaughter can be justified on both animal welfare and food safety grounds, but I also respect the position of those in the farming community and appreciate that such a prohibition would be an affront to those capable and caring farmers who slaughter on-farm in a humane and sanitary manner. I am also sensitive to the fact that an all out prohibition of slaughter would be extremely difficult to enforce.

My view is that on-farm slaughter for personal use should be exempt from inspection but should, by regulation, be subject to the requirement that animal slaughter be undertaken in a prescribed, humane manner and the processing of the meat done under prescribed sanitary conditions.

Chapter 5 - Transportation and Livestock Sales

The transportation of animals is conducted by a variety of people, including producers, operators of feedlots, abattoir operators and transport companies. Vehicles used to transport animals range from pick-up trucks and small trailers to full size transport trailers that can carry 40 head of cattle, dozens of pigs or poultry by the hundreds.

Food safety concerns that relate to the transport of animals arise from the mistreatment of the animals and the potential for cross-contamination. Although the extent of the impact of inhumane treatment on meat safety is not clear, there is evidence that suggests that malnourished and unduly stressed animals are more susceptible to disease and a substantial portion of condemned livestock are animals that have been subjected to inhumane treatment.

In Canada, the CFIA has primary jurisdiction over the transport of livestock in its administration of the *Health of Animals Act*. The regulations set limitations for the length of transport and prohibit overcrowding and the physical mistreatment of animals.

Notwithstanding these regulations, there is concern that not enough is being done to ensure the welfare of livestock during transport. Resources for enforcement are minimal and a comparison of standards with other jurisdictions leads to the conclusion that standards and practices need to be reviewed and reconsidered.

There are 42 livestock sales operations in Ontario which offer livestock for sale at facilities known as sales barns. In the normal course, animals are transported to these facilities, sold by auction and then transported from the sales barn to an abattoir for slaughter.

Many of the animals sold at sales barns are milk producers or breeders which are no longer achieving the desired level of production and as a result, are being cut from the herd and sold for slaughter. These cull animals are older and have a higher incidence of health problems. As a result, their assembly at sales barns increases the risk of transmission of diseases or pathogens. Inspections at livestock community sales can identify unhealthy animals before they have travelled further into the system and potentially contaminated or infected other animals or humans.

The inspection program at sales barns involves one OMAF inspector who audits the operations and provides some supervision for the lay inspectors who are employed by the owner of the sales barns. Those inspectors are required to observe all animals presented at the sale and to segregate, for veterinary inspection, any abnormal stock they identify. A veterinarian then determines whether the animal is sufficiently fit to qualify for sale and slaughter. The inspection program at sales barns would benefit from additional training programs for the lay inspectors and further oversight by OMAF.

Chapter 6 - Abattoirs

Provincially licensed animal slaughter plants (abattoirs) are the primary focus of the present meat inspection regulatory regime in Ontario. The abattoir is a critical stage in the meat production continuum as it presents some of the best opportunities to reduce or control contamination.

Mandatory inspection of abattoirs was introduced in Ontario in the 1960s. Since then, there have been a number of legislative changes which have refined and strengthened the system.

Meat inspectors, who are also known as meat hygiene officers, represent the backbone of the system. They are the primary line of defence in the delivery of safe meat. No animal may be slaughtered unless an inspector is present and has approved that animal for slaughter. Inspectors receive administrative support from their area managers and technical support from regional veterinarians and veterinary scientists who are available for consultations.

A competent inspectorate is essential to ensure the integrity of the system and maintain consumer confidence. During the course of this Review, I met with many meat inspectors who expressed their concerns about certain shortcomings in the system and offered their views on what could be done to improve it.

Meat inspectors have traditionally been long-term employees. However, after the government turned primarily to fee-for-service contract inspectors in 1996-1997, it became increasingly difficult to retain inspectors. The exceptionally high turnover created challenges in education and training. Those applying for the vacated positions often had little or no experience in the meat industry and there were fewer and fewer experienced inspectors to mentor the recruits. In recent years, OMAF has made a considerable effort to update and improve their training program, although there is a continuing need for more practical training.

Although OMAF's commitment to the delivery of safe food is apparent from a review of all the safe food initiatives undertaken since the launch of the OFSS, its traditional role as the champion of agriculture creates a potential conflict of interest. This is especially so in the Food Inspection Branch where the Director is charged with ensuring both the health of the industry and the safety of the public. In many respects, these goals are consistent, but they can conflict.

An allegation of unsafe practices can have devastating business consequences for the operator of an abattoir. Therefore, although a safety first response might dictate the provisional suspension of a plant licence, there is a potential for indecision on the part of the person charged with both fostering and regulating the industry. During the course of the Review, it was apparent to me that there is a suspicion that public safety may not always be OMAF's primary consideration when a difficult choice has to be made between the interests of the "client," being agriculture, and the public at large.

I do not contend that there is any policy of OMAF or any intention on the part of anyone at OMAF to make the safety of the public anything but its first priority, but there is evidence of a reluctance to act decisively when the issues of public safety and client welfare collide. This only fuels the perception that public safety is sometimes taking a backseat to the agricultural industry. Having said that, let me quickly add that virtually every person I spoke to at OMAF and throughout the meat industry is focussed on safety. They all care about public health and realize that consumer confidence is essential to the industry's economic survival. They know that the only way they can gain and maintain that confidence is by implementing and maintaining safe practices and standards.

Nonetheless, it is my view that the current organizational structure of OMAF fails to reflect a safety first approach to agriculturalmanagement and food production. The Director, Food Inspection Branch, should not be in the position of having to promote and police the meat industry. There needs to be some separation between those two functions. Although good business practices and product safety are complementary goals, if the principle of safety first is to be embraced, it is important to establish a clear line between the promotion of the agricultural industry and meat safety.

In order to accomplish this, OMAF should establish a Food Safety Division that is focussed on the delivery of safe food to the people of Ontario. This restructuring also contemplates the creation of a new position of Chief Veterinarian of Ontario (CVO). This person, a veterinarian, would assume the lead within OMAF for all food safety issues and be OMAF's voice during any food safety crisis. Under the direction of the CVO, the Food Safety Division would be responsible for inspection services, animal health, food safety science and policy, and enforcement.

Non-ambulatory animals, in particular, cattle, have been a food safety and animal welfare concern for a number of years. Recent events, however, have focussed attention on the issue of downer cows in Ontario. Aylmer Meat Packers Inc., the subject of much publicity in the summer of 2003 as a result of a product recall, was a facility that processed a large number of downer cows. Also, BSE (mad cow disease), was discovered in downer cows in Alberta and in Washington State, U.S. in 2003.

There has been much debate over the disposition of downers, with some advocating their exclusion from abattoirs and the food supply. Certain stakeholders believe the transport of downer animals is inhumane and there is an understandable reaction from consumers that meat from these animals is unwholesome. However, many downer animals have injuries or other problems that on close examination have little or no relationship to food safety or wholesomeness. Those in the industry, therefore, maintain it would be wasteful not to use the meat from these animals provided it conforms to meat inspection standards. Furthermore, banning these animals from the food chain could encourage illegal slaughter and the sale of uninspected meat processed under unhygienic conditions.

Cattle become non-ambulatory at all ages and for a variety of reasons. However, most downer animals are dairy cows that are at the end of their productive lives and are being sent for slaughter to salvage what little value remains. The quality of their meat is low and although it cannot be said that this meat is unsafe, there is a heightened risk. Since it is the producer who benefits most from permitting these higher risk animals into the system, it is the producer who should bear the cost of any additional vigilance that is required to ensure the safety of the meat.

The producer currently bears the expense of having a veterinarian examine the animal for the purpose of issuing a certificate for direct transport to slaughter. Although not currently specified, the regulation should also require the veterinarian to record the diagnosis on the certificate and no non-ambulatory animal should be admitted to an abattoir unless accompanied by a certificate for direct transport. Mandatory testing (including BSE testing) should be conducted on every non-ambulatory animal approved for slaughter with the cost of that testing being borne by the producer.

Chapter 7 - Disposal of Meat Production Waste

The production of meat produces waste. The nature and quantity of the waste varies at each stage of the farm to fork continuum, but includes the carcasses of dead animals, parts of animals which are treated as inedibles, bones, hides and blood. Animals die for a variety of reasons and their carcasses are a normal by-product of farm production. Based on mortality rates and livestock statistics in Ontario, it has been estimated that the annual mass of deadstock alone is greater than 86,000 tonnes. The meat waste from federal and provincial abattoirs in Ontario is believed to be 333,000 tonnes each year.

Methods of disposal permitted in Ontario include burial, composting, incineration and rendering. Rendering is a process which is applied to materials derived from slaughter, processing and deadstock to remove the moisture and separate the materials into sterile animal protein meals and fat products such as tallow. Unfortunately, the discovery of BSE in cattle around the world and in North America has had a considerable impact on the rendering industry. It is believed that BSE can spread among cattle when they consume prions from carcasses of other cattle found in protein meal produced by rendering. Notwithstanding the extremely low risk of such products containing prions in North America, the impact of reduced public confidence and protective regulatory measures have greatly reduced the markets for rendered products. This, in turn, has substantially reduced the market for deadstock and meat waste that is used to produce those products. These and other developments have had a devastating effect on those engaged in the business of receiving and collecting deadstock. With markets reduced and farmers being unable or unwilling to pay collection fees for the removal of deadstock from the farm, there are fewer collectors in business and more and more incidents of carcasses being dumped and left to decay. Improper or illegal disposal methods create a risk to human health through the potential transfer of pathogens and can pose a risk to the environment.

It is apparent that the current system cannot handle the glut of deadstock and waste from meat production. There is no simple answer to this problem. It is a complicated issue involving market forces, farm management practice, health and environmental concerns, and the application of both traditional disposal practices and emerging technologies. It is apparent that new strategies must be explored in searching for a long-term solution, however, there is a crisis at hand in this sector of the meat industry which must be addressed now.

Chapter 8 - Meat and Fish Processors

Meat has been processed for centuries. Originally, processing was essentially used to extend the period during which a product could be safely consumed. Salting and smoking are traditional meat processing methods that are still used today. In addition, meat may be ground, cured, fermented, or mixed with other ingredients. The finished products may be ready-to-eat or may require further preparation before consumption and include ground meat, hot dogs, sausages, ham, bacon and cold cuts. Currently, meat processing is the largest sector of the food industry in Canada with sales exceeding $14 billion.

Meat processors who participate in interprovincial or export trade must be federally registered. Their businesses are regulated by federal legislation and overseen by the CFIA. The activities of all others are governed by provincial legislation. Currently, all meat processing operations not conducted at abattoirs are subject to regulation under the *HPPA* and inspected by public health inspectors from Boards of Health. These facilities are known as free standing meat processors (FSMPs). Meat processing operations conducted within a provincially licensed abattoir are overseen by OMAF as part of the inspection program it administers pursuant to the *MIA*. Although there seems to be no justification for maintaining different standards, the regulations under the *MIA* and the level of inspection are more demanding.

If the *FSQA* is proclaimed, OMAF will also have authority to regulate FSMPs and is expected to assume jurisdiction for the regulation and inspection of all such facilities that conduct high risk processing activities (eg. smoking, curing, fermenting) and are not federally inspected. In my view, OMAF is better positioned to undertake responsibility for the inspection of such FSMPs, but I am also satisfied that properly resourced, both OMAF and MOHLTC are capable of administering effective inspection programs. Whatever the configuration, the regulations must be consistent for all meat processors and the delivery of inspection must be comprehensive.

Since the *FSQA*, once proclaimed, will provide for the quality and safety of all agricultural and aquatic commodities, it seemed appropriate to consider the regulatory regime for the processing of fish as part of this Review. The MNR administers the *FIA* and its regulations set out certain standards to address food safety, such as requirements for chilling or icing fish during storage. However, there is no inspection program in place for non-federally registered fish processors to ensure that the processing activities, equipment and facilities meet the food safety standards contained in the legislation. In my view, the lack of a fish inspection program in Ontario constitutes a risk to the public and it is important that such a program be developed to deal with the particular features and risks of fish processing. There is no reason why those who consume fish should not have the same level of protection as those who eat meat.

Chapter 9 - Meat Retail and Distribution

There are thousands of businesses in Ontario which sell meat and meat products. The prevention and management of risks at this stage falls within the scope of authority of the Public Health Branch of the MOHLTC and the Boards of Health across Ontario.

Under the provisions of the *HPPA*, medical officers of health are obligated to ensure inspection of food premises for the purpose of preventing, eliminating and decreasing the effects of health hazards and to investigate complaints. Food premises include all facilities where meat is processed, stored or sold. The MOHLTC has established food safety program guidelines for the Boards of Health, including standards for the frequency of inspections.

Boards of Health in Ontario are required to employ inspectors who are either veterinarians or hold a certificate in public health inspection. In order to obtain that certificate, the inspector must complete one of five accredited post-secondary educational programs offered in Canada, pass a certification examination, and complete a practicum. In the course of their duties, public health inspectors are authorized to issue orders requiring compliance by operators of food premises and as provincial offences officers may issue tickets for infractions.

Each Board of Health operates with a good deal of autonomy. This is helpful in addressing local public health issues, but also results in inconsistency in the delivery of services throughout the province. More needs to be done to coordinate the efforts of Boards of Health to remedy this shortcoming in the system.

Boards of Health receive their direction from the Food Safety and Safe Water Unit of the Public Health Branch of the MOHLTC. That unit has insufficient capacity to provide effective oversight and leadership of the Boards of Health. Citing lack of resources, most Boards of Health acknowledged that the required number of inspections of food premises are not being undertaken.

Funding of public health and, in particular, the activities of the Boards of Health is critical to the success of a public health food safety program. Foodborne illness remains a significant problem in Ontario. Sufficient funding must be provided to ensure consistent delivery of the mandatory food safety programs across Ontario.

Notwithstanding the strength of the system of food safety in Ontario, there will still be a need, from time to time, to determine whether some meat or meat product has caused foodborne illness. Medical officers of health and the federal authorities have the jurisdiction to recall meat products. Although this seldom occurs, it is very important that the relevant authorities have a clear understanding of their respective roles and responsibilities and adhere to approved protocols in order to address an emergency effectively and avoid unnecessary duplication and confusion.

Chapter 10 - Consumers

The consumer is the "fork" in the farm to fork continuum. As much as 50% of foodborne illness may be linked to the home setting, so it is important that consumers understand their role in food safety.

There are risks associated with any food and the objective of any public education intervention should be to enhance consumer knowledge about these risks and improve their safety behaviours. Consumer confidence in meat safety is essential. To this end, it is important to help consumers understand how the food safety system works, what efforts are being taken by government, producers and industry to reduce risks in food and what prudent and sensible steps they can take to address potential risks.

Most food safety awareness and education programs based on epidemiological data have focussed on one or more of the five following behaviours:

- practicing proper personal hygiene;
- cooking foods adequately;
- avoiding cross-contamination;
- keeping foods at safe temperatures; and
- avoiding food from unsafe sources.

While the old adage still applies, "when in doubt, throw it out," consumers are also being asked to take science-based preventative measures that recognize that most foodborne illnesses are caused by microorganisms that cannot be detected by sight or smell. The incorrect belief of many consumers that you can tell bad meat by sight or smell alone needs to be addressed. To be effective, food safety education messages must not only provide factual scientific information, but must also help consumers set aside and change incorrect beliefs and behaviours. Simple but informative labels with information on food handling and safe preparation should accompany all meat products.

There was a time when home economics was taught as part of the required curriculum in Ontario and health studies courses would have provided an opportunity to teach students basic food safety skills. Many young people are involved in food preparation at home and in part-time jobs. Basic food safety education should be delivered to every student either as part of a health, life skills or job skills related course.

Chapter 11 - Compliance and Enforcement

Ontario's meat regulatory system is designed to protect public health and the safety of animals. Through a patchwork of legislation overseen by multiple ministries, the province prohibits certain activities unless conducted under the authority of a licence. The province has specified standards with respect to premises, equipment and business practices, requires independent monitoring of certain operations and has established a variety of responses to non-compliant conduct.

OMAF is the ministry responsible for legislation relating to on-farm slaughter, the transportation of non-ambulatory animals, the licensing and regulation of abattoirs and connected processing and retail facilities. If the *FSQA* is proclaimed, OMAF will also be responsible for overseeing the activities of FSMPs.

Under current legislation, livestock community sales operations, abattoirs, deadstock collectors, meat waste disposal operators and livestock dealers must be licensed. These statutes allow the Director of OMAF's Food Inspection Branch to suspend an operator's licence on an interim or provisional basis if the Director is of the opinion that there is an immediate need for the protection of health or safety of the public. Upon exercising that power, the Director is required to hold a hearing to determine whether a further suspension or revocation of the licence is warranted.

It is also an offence to contravene the provisions of any of these licensing statutes with conviction being punishable by fine or imprisonment. If proclaimed, the *FSQA* will broaden the existing offence provisions and substantially increase the penalties that may be imposed.

Compliance and enforcement at OMAF is managed by the Enforcement Advisory and Liaison Officer (EALO) under the supervision of the Director. The EALO receives and directs complaints for further action. They may be addressed by the two compliance and advisory officers on staff at OMAF, or forwarded to the Agriculture Investigations Unit at the MNR which, under agreement with OMAF, has been handling such investigations and enforcement since 2000. The MNR, which has an experienced and well-equipped enforcement branch, is well-suited to fulfill this function although its Agriculture Investigations Unit is currently under-resourced and unable to undertake many of the investigations which should be referred to them.

Apart from the practical problems that arise from insufficient resources, the principle concern I have with compliance and enforcement is the position occupied by the Director of the Food Inspection Branch. As the senior OMAF employee responsible for issuing licences and the delivery of food inspection services, there is an obligation on the Director to be intimately aware of the meat inspection program and its various components for the delivery of those services to the industry. The Director also knows the people in the industry.

Although such inside knowledge is, no doubt, beneficial in administering the business of the Food Inspection Branch, as a quasi-judicial officer, the Director has an obligation, once an event that triggers a hearing has occurred, to ensure that the expectation and requirement of impartiality is observed. This requires a determination of the issues on the evidence before the Director at the hearing. The Director is in a difficult position no matter what order is made. If the decision is adverse to that being sought by OMAF staff, they may feel unsupported and embarrassed. Conversely, a finding that the complaint is well-founded may lead to criticism that the Director is not sufficiently understanding and supportive of the industry. No matter the result, the Director has to return to work the following day and resume his position on the administrative tightrope between the inspectorate and meat processors.

In my view, this flaw in the hearing process can be remedied by transferring the administrative licensing function to the Chief Veterinarian of Ontario as the head of the proposed Food Safety Division with the hearing or appeal function being transferred to a Tribunal that has no operational responsibilities. Additional deficiencies I identified can be addressed by an increased commitment to strict enforcement of food safety legislation, the development of compliance and enforcement policies, greater coordination of activities by enforcement bodies and the development of an integrated information system.

Chapter 12 – Role of Communication in Meat Safety

No government should need reminding today that the failure to be open and honest with the public leads to mistrust and an erosion of public confidence. Disclosure is particularly important with information concerning something as fundamental as food safety.

If the government provides regular, consistent and accurate messages in its communication with the public, there is a strong likelihood that the public will understand food safety related risks and issues. In recent years, the provincial government has failed to adequately articulate its vision, strategies and plans for food safety. It has failed to communicate to the public that it has developed specific plans and undertaken initiatives to improve food safety. The government expended large sums of money for these purposes without publicly reporting on how they were being spent, and mysteriously, has not provided information to the public about much of the good work and systemic improvements which have already been accomplished.

Effective risk communication should endeavour to build and maintain trust and confidence. It should facilitate a higher degree of consensus and support by all interested parties for the risk management options being proposed. Building trust and managing the public's perception of risk is a challenge for any government. The media's wide reach and influence on public perception make it an important vehicle for risk communication. While many think of the media as narrators of events such as foodborne illness outbreaks, food recalls, health advisories and food warnings, their role is far greater. The media is a powerful vehicle for the delivery of health risk information and advice to the public.

The public expects the government to be ready to respond appropriately to any emergency or crisis. Communication is an important part of the response expected in a time of potential crisis. Several stakeholders suggested that the provincial government did not have or use a good communication strategy during recent meat safety events. The news reports of those events appear to support their contention.

Measures should be put in place to ensure that the public is provided with timely, complete, consistent and accurate information. One government agency should take responsibility for communicating with the public in each incident and all government authorities involved in managing meat safety incidents should include, within their emergency preparedness plans, a clear communication strategy and protocol.

Chapter 13 - Reconciling the Provincial and Federal Systems

All levels of government are engaged in food safety initiatives at every stage along the farm to fork continuum. Part of my mandate in conducting this Review was to "make recommendations on approaches to strengthen regulatory and legislative systems, including strategies for accelerating harmonization with the federal government." I believe that the adoption of my recommendations will bring the standards and practices of the federal and provincial meat inspection systems into harmony.

The proclamation of the *FSQA* will provide the legislative structure that is necessary to achieve that goal, and regulations that are consistent with the National Meat and Poultry Regulation and Code (NMPRC) will establish standards that are comparable to those in place for the federal system. The introduction of HACCP-based food safety programs all along the farm to fork continuum will ensure good practices and proper standards are observed and maintained. The specific policies I have recommended with respect to issues such as on-farm slaughter and the treatment and processing of downer animals should address specific safety concerns raised by animal welfare advocates and consumers. The training initiatives I have recommended for meat hygiene officers together with the increase in operational and veterinary support will ensure that the Ontario public will be served by an experienced and competent inspectorate capable of ensuring that the high standards being set are observed. The movement toward harmonization will produce joint training opportunities and more efficient use of scientific resources. It will also facilitate the implementation of coordinated efforts regarding disease surveillance, traceability and biosecurity which are essential to any food safety system.

But, as was so often observed during the course of the Review, there will always be those who, for expedience or profit, will ignore the rules and put others at risk. The system must, therefore, have the enforcement capacity to detect and deter potential offenders.

I have identified certain gaps and duplications in the delivery of food inspection services in Ontario and have suggested ways to eliminate them. However, jurisdiction over inspection services continues to reside in two separate ministries. OMAF is responsible for seeing meat safely to market and MOHLTC has responsibility for its safe delivery to consumers. I am satisfied that this system with the adjustments I have recommended will provide the people of Ontario with reliable and effective meat inspection. Nonetheless, I was drawn, from the outset, to the idea of a single agency responsible for all food inspection from production through to consumption. Indeed, the creation of the Food Safety Division at OMAF that I have recommended would be a step in that direction.

The CFIA was born out of efforts to coordinate and rationalize federal food inspection services. The logistical challenges faced by the federal government were perhaps larger in scope but very similar in kind to those we are now addressing in Ontario. Provincial food inspection services in Québec are undertaken by a single agency similar to the CFIA. The creation of a food inspection agency, with responsibility for all aspects of food inspection is, in my view, the next logical organizational step in the process of modernizing the food safety system in Ontario and would greatly facilitate the process of harmonization with the federal government.

In order to create such an agency, the provincial government will have to decide which ministry the agency will report to and which ministry will be responsible for establishing food safety policies and standards. This would require some adjustment to the current roles and responsibilities of OMAF and MOHLTC, although it seems to me that OMAF is best positioned to direct the operational aspects of such an agency whereas MOHLTC should have the responsibility for setting the standards necessary to protect public health.

Chapter 14 - Process of the Review

This was an independent review authorized by Order-in-Council. It was not a public inquiry. I had no authority to compel the attendance of witnesses or the production of documents. The Order-in-Council simply provided that I could "request any person to provide information or records . . . and hold public and/or private meetings."

The purpose of this Review is to strengthen public health and safety and business confidence. In order for the Report to be worthy of the public's confidence, the process had to be open, fair and thorough. At the outset, I was concerned that it would be a challenge to achieve these goals given the time frame and procedural limitations of the mandate. On the other hand, without the sceptre of fault looming in the background, I thought this process could perhaps provide a platform for a more cooperative and constructive discussion of the issues relating to meat safety and I believe that has occurred.

I initially corresponded with many individuals and groups whom the staff and I identified as interested parties and invited their submissions.

In addition to numerous meetings with key personnel at OMAF, MOHLTC and MNR, as well as representatives from the many stakeholder organizations, I held two public meetings – one in Peterborough and the second in London - to provide a forum for those interested in speaking publicly about the issues I was being asked to address.

The modern approach to food safety is science-based and expert advice was required in order to assist me in assessing the effectiveness of the current regulatory regime and in considering measures for strengthening it. It was also apparent that advice would be needed from a number of disciplines. In selecting members of the expert advisory panel, I attempted to ensure the group would reflect the necessary diversity of experience and perspective that was required.

The panel prepared a draft report which was then circulated to other public health and food safety specialists for their review. A one day conference was convened in Toronto with myself, the Review staff, the panel and the invited reviewers in attendance for the purpose of discussing the conclusions and proposals in the panel's preliminary report. With the benefit of these additional views, the panel completed its report and submitted it to the Review with its recommendations.

I was persuaded that I would not be able to properly apprehend the task before me without witnessing the various operations that constitute the meat industry. As a result, the Review staff and I toured 14 separate facilities.

Prior to my appointment to conduct this Review, I had not been inside a slaughterhouse. It was one of life's experiences that I had been prepared to forego; something I suspect I shared with any number of others. For me, at least, it was easy to make the direct transition from cattle in the field to beef in the supermarket. I really did not give much thought to the steps in between. These tours, then, were very instructive. Not only did I learn how meat was produced, but I also witnessed the reality of it.

The result of our efforts over the past six months is this Report containing 113 recommendations. Each of the recommendations represents an important step in the development of a comprehensive and efficient food safety system. The goal of the recommendations is to ensure that meat produced in provincially regulated facilities is delivered with a level of risk so negligible that a reasonable and informed person will feel safe eating it.

Recommendations

1. **I recommend that the *Food Safety and Quality Act, 2001* be proclaimed without further delay with the promulgation of regulations that are equivalent to the National Meat and Poultry Regulations and Code.**

2. **I recommend that the provincial government publicly articulate its policy, targets and goals in respect of food safety including food safety objectives. The province should also develop and make public a business plan for its food safety initiatives with appropriate methods to measure the results and deliver an annual public report outlining its program priorities, strategies, objectives and achievements.**

3. **I recommend that the provincial government promulgate regulations to require mandatory HACCP-based food safety programs across all sectors of the food continuum including farms, abattoirs, transportation, free standing meat processors and food premises.**

4. **I recommend that the provincial government provide appropriate resources to support the development and implementation of mandatory HACCP-based food safety programs and to ensure there is appropriate training of inspectors, auditors, operators and employees involved in these programs. I also recommend that the provincial government develop appropriate written materials and tools, guidelines, and generic models for industry and make them readily available at a reasonable cost.**

5. **I recommend that the provincial government develop a strategy to provide support and assistance to small and medium-sized enterprises in the implementation of mandatory HACCP programs.**

6. **I recommend that the provincial government provide small and medium-sized enterprises with financial assistance in the form**

of grants and low interest loans to be applied towards HACCP implementation costs including capital costs.

7. **I recommend that in developing mandatory HACCP-based food safety programs, the provincial government establish clear food safety objectives and prioritize hazards along the food continuum to ensure the areas of greatest risk are effectively identified and managed.**

8. **I recommend that the Ministry of Agriculture and Food complete all baseline studies currently being undertaken and those which are planned. I recommend that the provincial government, at the earliest opportunity, establish mandatory microbiological performance standards and that these standards be enacted by way of regulation and communicated to the industry.**

9. **I recommend that the provincial government continue its work with the federal government and other provincial governments to establish a national strategy on microbiological food safety including national microbiological performance standards.**

10. **I recommend that the provincial government in cooperation with the federal government and other provincial governments, establish an advisory committee which should be mandated to provide expert advice on questions relating to the microbiological safety of food.**

11. **I recommend that the provincial government provide necessary direction and resources to ensure that it has a high quality food safety science and laboratory capacity to provide research, surveillance and risk analysis.**

12. **I recommend that the provincial government work together with industry and commodity groups as well as the governments of Canada and the other provinces to develop a national strategy for traceability.**

13. **I recommend that the provincial government in conjunction with commodity and industry groups develop an effective meat**

safety traceability system for Ontario designed to allow meat to be traced across the food continuum.

14. **I recommend that the provincial government in consultation with the federal government and stakeholders support the development of mandatory registration for all livestock farms in Ontario.**

15. **I recommend that the provincial government develop a biosecurity strategy and plan for livestock, poultry and meat products in Ontario.**

16. **I recommend that the provincial government work in cooperation with the federal government, including the Canadian Food Inspection Agency, and other provincial governments to develop a national biosecurity strategy.**

17. **I recommend the provincial government provide necessary resources to ensure that disease surveillance, testing and reporting continue to the levels set out in the existing policies year round.**

18. **I recommend that the Ministry of Agriculture and Food ensure that on-site meat inspectors have access to the results of testing through the Food Safety Decision Support System.**

19. **I recommend that the provincial government undertake a review to ensure that Ontario has effective surveillance strategies and programs for animal health, food hazards and foodborne illnesses in a system that is integrated, transparent, properly resourced and coordinated with national surveillance programs.**

20. **I recommend that the Ministry of Health and Long-Term Care expedite the implementation of a system such as the Integrated Public Health Information System (iPHIS), to track all foodborne illnesses across the province and permit access and analysis of the data, by all Boards of Health in the province.**

21. **I recommend that the provincial government establish an Ontario Food Safety Reporting Centre to be responsible for the**

coordination of all matters relating to food safety in the province.

22. **I recommend that the provincial government implement a system such as the Electronic Laboratory Exchange Network (eLEXNET) system in provincial and private food laboratories in Ontario to permit the extraction and integration of data from different reporting systems.**

23. **I recommend that the provincial government undertake a review to ensure that Ontario has level three containment facilities that are capable of supporting investigations into emerging pathogens and other foodborne illnesses.**

24. **I recommend that the Ministry of Health and Long-Term Care develop a standard food safety testing policy and procedure for the Boards of Health which should form part of the Mandatory Health Programs and Services Guidelines.**

25. **I recommend that the provincial government review its capacity to conduct testing and research of the causes of foodborne illnesses and or prion related zoonotic diseases such as bovine spongiform encephalopathy (BSE) and expand its capacity as necessary based on the outcome of that review.**

26. **I recommend that the Ministry of Health and Long-Term Care develop and implement a system of electronic submission and reporting forms for the food safety investigation samples submitted by public health inspectors.**

27. **I recommend that the Ministry of Agriculture and Food support the development of an on-farm food safety framework, as well as training and support measures to ensure that all livestock farms have the capacity to develop and implement an on-farm food safety plan.**

28. **I recommend that the Ministry of Agriculture and Food support the development and delivery of an on-farm food safety program specifically targeting small and medium-sized mixed**

livestock farms in conjunction with the producer groups who represent these farmers.

29. **I recommend that the Ministry of Agriculture and Food work with stakeholders to create a provincial framework for recognition of provincial on-farm food safety programs and that the Ministry recognize provincial programs where no nationally recognized program exists.**

30. **I recommend that the Ministry of Agriculture and Food establish requirements and training programs for key prerequisite programs for on-farm food safety plans, including good production practices.**

31. **I recommend that the Ministry of Agriculture and Food ensure that all farmers who raise animals for food receive specific information on disease surveillance and reporting for each type of animal, how to access additional resources and their obligations with respect to reporting.**

32. **I recommend that the provincial government promulgate a regulation prohibiting the sale of livestock medicines or feed additives to any person not holding a Livestock Medicines Education Program Certificate.**

33. **I recommend that the Ministry of Agriculture and Food provide training on safe and proper handling of non-ambulatory animals on-farm, humane euthanasia, and on-farm disposal of livestock and poultry mortalities.**

34. **I recommend that regulations made under the *Food Safety and Quality Act, 2001* prescribe and describe acceptable procedures and equipment for on-farm slaughter and dressing.**

35. **I recommend that farmers who sell meat or poultry products directly to the public be subject to the same standards, level of inspection and food handler training requirements as any other retailer.**

36. **I recommend that the Ministry of Agriculture and Food work with industry groups and transporters to develop training on**

the handling of animals in transport, the handling of meat products in transport, and to develop and implement HACCP-based and biosecurity plans for transporters.

37. **I recommend that the regulations under the *Food Safety and Quality Act, 2001* require standardized forms and record keeping for the transport of animals, meat and meat products pending implementation of the recommended traceability program.**

38. **I recommend the provincial government make regulations for the transport of animals under the *Food Safety and Quality Act, 2001* that are comparable to the *Livestock Transportation Regulation* in Alberta.**

39. **I recommend that the *Livestock Community Sales Act* be incorporated into the *Food Safety and Quality Act, 2001* by way of regulation that would continue, but modernize the current livestock community sales program to match or exceed generally accepted standards for animal treatment.**

40. **I recommend that the existing livestock community sales program be strengthened with increased oversight of the lay inspectors and appointed veterinarians by an increased complement of Ministry of Agriculture and Food inspectors with responsibilities for monitoring the sales barn program.**

41. **I recommend the continued participation of the Ontario Society for the Prevention of Cruelty to Animals in the livestock sales barn program.**

42. **I recommend that a captive bolt pistol be kept on-site and available at all sales barns for use by the appointed veterinarians.**

43. **I recommend that regulations require that any animal with a suspected health problem at a sales barn should be referred for examination and disposition by a veterinarian.**

44. I recommend that the licence fee for the provincially licensed abattoirs be increased substantially and be based on the production volume of the particular plant.

45. I recommend that the Ministry of Agriculture and Food develop standardized training programs for all personnel at abattoirs on humane animal handling, slaughter and dressing.

46. I recommend that the Ministry of Agriculture and Food develop and implement a plan for the initial and continuing education and training of appointed veterinarians.

47. I recommend that the Ministry of Agriculture and Food implement a system to require all exemptions and approvals of special procedures be recorded and accessible to all meat inspection delivery staff.

48. I recommend that a Food Safety Division be created within the Ministry of Agriculture and Food headed by a Chief Veterinarian of Ontario with three branches: Food Safety Science and Policy; Food Safety Inspection Services; and, Food Safety Investigations and Enforcement.

49. I recommend that the provincial government provide appropriate funding to support the joint Ministry of Agriculture and Food and University of Guelph special project that was constituted to make recommendations for the establishment of a comprehensive training program for meat inspectors in Ontario.

50. I recommend that the Ministry of Agriculture and Food implement a policy of continuing education and training for its meat inspectors.

51. I recommend that the Ministry of Agriculture and Food require that all management intervention in operational decisions at provincially licensed plants be documented.

52. I recommend that the Ministry of Agriculture and Food establish a formal complaints process requiring industry

complaints about meat inspectors to be made in writing with a copy to the inspector.

53. **I recommend that the Ministry of Agriculture and Food increase the number of regional veterinarians from two to five and the complement of area managers from eight to ten.**

54. **I recommend that an independent audit be undertaken to determine the number of inspectors required in the abattoirs to provide proper inspection.**

55. **I recommend that the provincial government ensure that a part-time meat inspector who, acting in good faith, stops the slaughter, receives payment for the balance of the scheduled hours for that day whether or not the slaughter resumes.**

56. **I recommend that the regulations relating to ante and post mortem inspection and specified risk materials removal be closely monitored and strictly enforced.**

57. **I recommend that non-ambulatory animals be prohibited from entering an abattoir unless accompanied by a veterinarian's certificate for direct transport that provides a veterinarian's diagnosis of the condition or disease that has rendered the animal non-ambulatory and that drug residue testing, histopathological testing of the brain and spinal cord and BSE testing of every non-ambulatory animal be conducted, with the carcass and inedibles being held pending evaluation of the test results. The cost of such tests should be charged to the abattoir operator, but ultimately borne by the owner of the animal.**

58. **I recommend that research be urgently carried out into the feasibility of regulated on-farm slaughter of non-ambulatory animals in Ontario. In the absence of regulated on-farm slaughter, I recommend the transport of downer animals be prohibited except by a licensed transporter who has the necessary equipment and expertise to transport such animals humanely.**

59. I recommend that the *Food Safety and Quality Act, 2001* and its regulations prohibit the consumption of wild game meat by anyone other than the hunter and his or her immediate family unless the harvesting, processing and distribution of the meat was done in full compliance with prescribed practices and procedures.

60. I recommend that the regulations under the *Food Safety and Quality Act, 2001* include a requirement that provincially licensed plants obtain permission to process wild game meat and that any processing adhere to standards similar to those in the current policy.

61. If wild game continues to be permitted into provincial abattoirs, I recommend that hunters be required by regulation to take training in the collection of pertinent information, safe dressing and transport procedures.

62. I recommend that the *Food Safety and Quality Act, 2001* and regulations to be promulgated thereunder regulate the activities of non-federally registered meat processors whether they are connected to an abattoir or free standing.

63. I recommend that the Ministry of Agriculture and Food and the Ministry of Health and Long-Term Care enter into an agreement to ensure that the activities of all meat processors are appropriately regulated and inspected without unnecessary duplication.

64. I recommend that the provincial government develop and implement a fish inspection program and promulgate a regulation under the *Food Safety and Quality Act, 2001* to licence non-federally registered fish processing plants and regulate the safety of fish being sold for human consumption in Ontario.

65. I recommend that the *Food Premises* regulation be amended to include fish and the processing of fish at food premises and to prohibit uninspected fish at food premises, once an inspection program is implemented.

66. **I recommend that the provincial government amend the *Health Protection and Promotion Act* to require each food premises in Ontario to register with the Board of Health in the jurisdiction in which the food premises carries on business.**

67. **I recommend that the Ministry of Health and Long-Term Care develop and implement a plan for the continuing education and training of public health inspectors across the province addressing meat safety and the regulatory standards for food premises.**

68. **I recommend that the provincial government amend the *Health Protection and Promotion Act* to require that the operator of a food premises and at least one staff member, present at a food premises during all hours of operation, be a certified safe food handler.**

69. **I recommend that the provincial government in cooperation with the food industry develop a HACCP-based food safety program for food premises in Ontario.**

70. **I recommend that the provincial government ensure that the standards for all meat retailers be consistent whether under the *Food Premises* regulation or pursuant to any regulation developed under the *Food Safety and Quality Act, 2001.***

71. **I recommend that additional staff and resources be provided for the Food Safety and Safe Water Unit at the Public Health Branch of the Ministry of Health and Long-Term Care so that it can provide timely and effective leadership and direction to the Boards of Health.**

72. **I recommend that the Ministry of Health and Long-Term Care take all necessary steps to improve compliance by the Boards of Health with the Mandatory Health Programs and Services Guidelines in respect of food safety standards.**

73. **I recommend that the provincial government provide adequate resources to the Boards of Health to hire sufficient numbers of public health inspectors and support staff to fulfill the**

requirements of the food safety program of the Mandatory Health Programs and Services Guidelines.

74. **I recommend that the Ministry of Health and Long-Term Care conduct annual audits to assess compliance of Boards of Health with the food safety standards of the Mandatory Health Programs and Services Guidelines.**

75. **I recommend that the Ministry of Health and Long-Term Care deliver an annual public report that sets out its objectives and evaluations for food safety standards, the reduction of foodborne illness and the performance of Boards of Health, including their compliance with Mandatory Health Programs and Services Guidelines.**

76. **I recommend that the provincial government address the deficiencies in the current funding system to ensure Boards of Health have sufficient funding to provide the mandatory food safety programs and services.**

77. **I recommend that the public health inspectors at Boards of Health be required to utilize standard inspection reports for food safety inspections of food premises to ensure that critical infractions are consistently recorded and that data is collected and shared with the Ministry of Health and Long-Term Care.**

78. **I recommend that the provincial government enter into an agreement involving the Ministry of Agriculture and Food, the Ministry of Health and Long-Term Care, the Ministry of the Environment, the Ministry of Agriculture and Agri-Food, Health Canada and the Canadian Food Inspection Agency regarding foodborne illness and food safety risk investigations and responses. I recommend that the agreement assign one government agency to take the lead on all communication to the media and public in foodborne illness and food safety risk investigations and responses. I recommend that the agreement provide for the establishment of a committee to coordinate each foodborne illness and food safety risk investigation and response which requires a multi-agency response with membership on**

the committee from each involved agency and the affected Board(s) of Health to maximize cooperation, efficiency and the effectiveness of the investigation and response.

79. **I recommend that the provincial government provide interim financial support to the deadstock collectors and receiving plants to see them through the present crisis and ensure collection of deadstock continues in the future.**

80. **I recommend that the Ministry of Agriculture and Food discontinue the pilot project which permits producer transport of deadstock and any illegal deadstock transportation be treated as such until appropriate legislative amendments are made to regulate the transport of deadstock by producers to receiving plants and resources are in place to enforce the regulatory standards.**

81. **I recommend that the provincial government enter into a foreign animal disease plan agreement with the Canadian Food Inspection Agency and develop its own comprehensive mass carcass disposal contingency plan in consultation with industry.**

82. **I recommend that the Ministry of Agriculture and Food and the Ministry of Environment enter into an agreement regarding their respective roles and responsibilities in the disposal of meat production waste and the manner in which they will respond to situations involving overlapping authority.**

83. **I recommend that the disposal of meat production waste, including deadstock, from the farm to processing, continue to be administered by the Ministry of Agriculture and Food. I recommend that the regulatory standards and permissible methods for the disposal of meat production waste be consistent irrespective of the source or location.**

84. **I recommend that the provincial government amend the *Dead Animal Disposal Act* and *Meat Inspection Act* regulations to require deadstock and other meat production waste to be disposed of within 48 hours unless frozen and stored in accordance with standards to be set out in the regulations.**

85. **I recommend that the provincial government, in collaboration with the industry, undertake an in-depth study and coordinate their planning and resourcing for long-term environmentally sound disposal capacity involving alternative recycling options.**

86. **I recommend that the Ministry of Agriculture and Food enhance its Food Safety Decision Support System to permit information on deadstock disposal complaints and responses to be recorded, searched and analyzed.**

87. **I recommend that the deadstock inspectors be given additional regulatory authority to issue orders requiring compliance with regulations.**

88. **I recommend that the regulations governing the disposal of deadstock be extended to include all species.**

89. **I recommend that the provincial government ensure that the disposal of meat production waste is appropriately regulated at all stages in the continuum.**

90. **I recommend that the provincial government, in conjunction with the meat industry and other levels of government, encourage the use of safe handling labels on all meat products for sale to consumers in Ontario.**

91. **I recommend that the Ministry of Agriculture and Food provide funding for the development of educational resources for delivery to the public relating to the food safety system, including the risks of purchasing uninspected meat.**

92. **I recommend that the Ministry of Health and Long-Term Care develop, in collaboration with the Boards of Health and the Ministry of Agriculture and Food, uniform consumer food safety education programs for delivery throughout Ontario.**

93. **I recommend that the provincial government evaluate the effectiveness of consumer food safety education materials and programs.**

94. I recommend that the curriculum for elementary and high school students developed by the Ministry of Education include instructions on food safety risks and proper food safety behaviours.

95. I recommend that the *Food Safety and Quality Act, 2001* be amended to differentiate between the powers and duties of inspectors and investigators.

96. I recommend that a Food Safety Investigations and Enforcement Branch be created within the Food Safety Division of the Ministry of Agriculture and Food.

97. I recommend that the Director of the Food Safety Investigations and Enforcement Branch be appropriately qualified, trained and experienced in agricultural and food safety investigations and enforcement.

98. I recommend that the Food Safety Investigations and Enforcement Branch be given the authority, responsibility and resources necessary to enforce food safety legislation administered by the Ministry of Agriculture and Food.

99. I recommend that the Ministry of Agriculture and Food increase its commitment to the enforcement of its food safety legislation.

100. I recommend that the Ministry of Agriculture and Food develop and implement a comprehensive compliance, investigation and enforcement policy.

101. I recommend that the *Food Safety and Quality Act, 2001* be amended to give the necessary authority for administrative licensing and imposition of administrative penalties to the Chief Veterinarian of Ontario.

102. I recommend that the *Food Safety and Quality Act, 2001* be amended to require that all hearings in respect of licensing matters, orders of inspectors or administrative penalties be conducted by the Agriculture, Food and Rural Affairs Tribunal or other tribunal created for that purpose.

103. **I recommend that the *Food Safety and Quality Act, 2001* be amended to eliminate any automatic period for compliance before a licensing hearing, to simplify its enforcement provisions, increase monetary penalties, revise offence provisions to address issues of attempts, employer and management responsibility, create rebuttable presumptions, and to permit prosecution before a Justice of the Ontario Court of Justice.**

104. **I recommend that the Food Safety Investigations and Enforcement Branch publicize the results of prosecutions and regulatory hearings, and deliver an annual public report of investigation and enforcement activities.**

105. **I recommend that the Ministry of Agriculture and Food develop and implement introductory and continuing education courses for investigators pertaining to meat safety and its regulatory scheme.**

106. **I recommend that the Ministry of Health and Long-Term Care, with assistance from Boards of Health, develop, implement and require adherence to a comprehensive province-wide investigation, compliance and enforcement policy extending to all food premises.**

107. **I recommend that the provincial government ensure that the enforcement tools and offence and penalty provisions of the *Health Protection and Promotion Act* are consistent with those in the *Food Safety and Quality Act, 2001*.**

108. **I recommend that the provincial government amend the *Health Protection and Promotion Act* and its *Food Premises* regulation to ensure that they apply to food businesses which are attached to or form part of a private residence.**

109. **I recommend that the Ministry of Agriculture and Food, the Ministry of Natural Resources and the Ontario Society for the Prevention of Cruelty to Animals reconcile their roles and responsibilities with respect to the enforcement of food safety and animal welfare issues.**

110. I recommend that the provincial government develop an integrated province-wide information system to support food safety compliance, investigation and enforcement services.

111. I recommend that the provincial government consider the establishment of an Ontario food inspection agency that would assume responsibility for all activities associated with ensuring food safety.

112. I recommend that the provincial government ensure an independent audit is undertaken after one year to assess and report publicly on the progress of the implementation of the recommendations in this Report.

113. I recommend that the provincial government consider enacting legislation to provide "whistle blower" protection for public servants akin to that provided for in the unproclaimed Part IV of the *Public Service Act*.

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Chapter 1 - Introduction

1.1 The Mandate

On January 9, 2004, I was authorized to review the meat[1] regulatory and inspection regimes in Ontario. The mandate I was given required a review of existing regulatory standards and the roles of various ministries that are responsible for overseeing adherence to those standards. The stated purpose for the review is to strengthen public health and safety and business confidence. To this end, I have been asked to make recommendations on approaches that can be undertaken by the government of Ontario to improve the current system, including strategies for accelerating harmonization with the federal government.

This review comes at a time when there are elevated concerns for public health arising out of the findings of the Walkerton Inquiry and more recently the several reports which have addressed the systemic problems exposed by the SARS crisis in 2003. Thankfully, there is no equivalent precipitating event for this review, but certain events of the past year, including the discovery of bovine spongiform encephalopathy in Canada and allegations of illegal activities at certain provincial abattoirs, have focussed the attention of the media and the public on the issue of meat safety in Ontario.

1.2 Bovine Spongiform Encephalopathy (BSE)

BSE, also known as “mad cow disease” was first diagnosed in the United Kingdom (U.K.) in 1986 and has since then been diagnosed in 21 other countries. It is believed that all cases are linked to the original epidemic in the U.K., and that the disease spread to other countries through international trade in contaminated meat and bone meal and in live cattle.

In May 2003, a cow sent for slaughter to a provincial abattoir in Alberta was diagnosed with BSE. That animal was condemned prior to slaughter and, therefore, was never processed for human consumption. Another case was discovered in December 2003 in the State of Washington, U.S. Later investigations demonstrated that this animal was born in Alberta and is believed to have contracted the disease in Canada. Both of these affected animals were born prior to the 1997 national ban on feeding ruminant-derived protein to ruminants (cattle, sheep, deer, *etc.*), and, therefore, may have consumed BSE contaminated feed. Intensive trace back and trace forward investigations have led to the slaughter and testing of approximately 2,000 animals with no additional cases being found. Nevertheless, it is possible that additional cases will be found in Canada, given the widespread movement of cattle and cattle feed in Canada. It is possible, although highly unlikely, that future cases could be found in any region, including Ontario.

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[1] Whenever “meat” is referred to in this Report, it means meat from a domestic animal which is intended for human consumption and includes “poultry” which means chickens, turkeys, ducks, geese and other birds.

1.3 Aylmer Meat Packers Inc.

Until the provisional suspension of its licence on August 21, 2003, Aylmer Meat Packers Inc. (AMP) was a busy abattoir which slaughtered cattle and hogs and processed their meat for sale to the public. AMP was known as a plant which specialized in non-ambulatory livestock described in the trade as "downers." The day before the provisional licence suspension, a number of search warrants were issued for AMP premises on the basis of allegations that AMP had caused meat from uninspected animals to enter the human food chain. The material filed in support of the warrants alleged that dead animals were being taken into the abattoir for processing after hours. While little is known about the search and any resulting seizure,[2] shortly after the execution of the search warrants, food products distributed by AMP became the subject of health hazard alerts and a mandatory food recall order. These actions and the nature of the allegations relating to AMP created a storm of publicity, concern and criticism of the provincial government's delivery of its oversight function. The alerts and recall order were widely distributed and created an apprehension that the health of a large number of Ontarians was at risk.

1.4 Wallace Beef Inc.

Wallace Beef Inc. is a provincially licensed slaughter plant located on premises at Pittsburgh Institution which is a minimum security correctional facility approximately twenty kilometres northeast of Kingston. This facility was designed to manage a small herd of beef cattle and an abattoir to produce meat for other correctional facilities in the area. Certain inmates apprenticed in the plant as part of a rehabilitation program operated by the Correctional Service of Canada. The abattoir conducted custom slaughter for local farmers, sold meat to the public from a retail counter on the premises and also sold its meat to local butchers, institutions and restaurants.

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[2] The terms of reference for this Review directed me to perform my duties without interfering in any investigations or criminal or other proceedings and to this end to defer interviews "with potential witnesses in order to maintain the integrity of those processes." See also Appendix B for a history of events at Aylmer Meat Packers Inc.

On October 7, 2003, the Director of the Food Inspection Branch of the Ministry of Agriculture and Food (OMAF) provisionally suspended the licence of Wallace Beef Inc. The suspension followed a report that an unidentified inmate had made allegations of questionable practices at the abattoir. The media reported that the plant was alleged to have sold ground meat containing meat from dead animals, sold uninspected meat and had labelled meat as *halal* which had not been slaughtered according to Islamic custom.

The licence of Wallace Beef Inc. was subsequently reinstated on November 9, 2003.[3]

1.5 Meat Inspectors

Following these events, the media raised questions about the effectiveness of the current regulatory system and meat safety became an issue during the election campaign in the fall of 2003. Although the focus was on the allegations relating to Aylmer Meat Packers Inc. and Wallace Beef Inc., the debate reached back to 1996 when most of the full-time classified meat inspectors were laid off and replaced by fee-for-service contractors. This was a cost-cutting measure implemented following a study by KPMG[4] that concluded there was inefficient utilization of full-time unionized meat inspectors. Although many of the contract jobs were taken up initially by former full-time inspectors, it became increasingly difficult to staff the inspectorate with qualified personnel because of lost job security and a reduction in income from reduced hours. In the end, many moved on to other careers, leaving a shallow pool of experience to assist in the training and monitoring of new recruits. Earlier cut-backs in management had resulted in the number of area managers being reduced to eight from ten and the number of regional veterinarians from five to two. This restructuring fostered resentment within the inspectorate, weakened the system and left it vulnerable.

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[3] The *Meat Inspection Act* (Ontario), R.S.O. 1990, c. M.5, permits the provisional suspension of an abattoir licence when it is necessary to do so in order to protect the safety or health of any person or animal. The Director is required to give reasons for the suspension in the notice of suspension and thereafter must hold a hearing to determine whether the licence should be suspended further or revoked. See Appendix C for further information on the Wallace Beef Inc. events.

[4] KPMG Project Report, *Study and Recommendations for Improving Meat Inspection Services in Ontario Provincially Inspected Abattoirs* (7 September 1995).

1.6 Meat Production In Ontario[5]

Although the scale and intensity of farming has increased over the years, there is still a wide range of farm sizes and types in Ontario. They range from large feed and grow operations involving hundreds or even thousands of animals to small farms with only a few animals raised for local markets or personal consumption.

1.6.1 Beef

The cattle population in Ontario has remained fairly stable over the past few years at between 2 and 2.3 million head. Cattle for slaughter come from two streams. The source of the larger stream is 16,000 beef farms with about 1.6 million cattle. Heifers (females) and steers (castrated male calves) are raised on pasture and after being weaned are shipped to backgrounder farms and feedlots for finishing on high energy rations. These cattle are usually slaughtered at 14 to 24 months. Culled cows from both beef and dairy herds constitute the second stream. These are cows that are no longer productive as breeding or milking stock. Provincially licensed abattoirs process approximately 15 percent of all cattle that are slaughtered in Ontario.

1.6.2 Veal

Bull calves culled shortly after birth from dairy herds are used to produce red (grain-fed) or white (milk-fed) veal. There are approximately 100,000 veal calves produced in Ontario annually, which represents forty percent of veal production in Canada. Seventy percent of Ontario's veal is slaughtered in provincially inspected slaughter plants.

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[5] All figures used in this section are courtesy of the *Report of the Expert Advisory Panel, the Scientific and Regulatory Basis of Meat Inspection in* Ontario (May 2004), Ch. 3.

1.6.3 Swine

There are approximately 4,900 swine operations in Ontario. Many farmers practice "all-in-all-out" management, where all livestock in a barn are sent to market and the barn is emptied, cleaned and prepared for the next group of animals. Many barns are capable of housing more than 1,000 head. Pigs are sold through a marketing system in Ontario at between 105 and 115 kilograms. There is also a significant local market in smaller animals (32 to 50 kilograms) that are referred to as "barbecue" pigs. Approximately 11 percent of the 3.5 million market hogs produced in Ontario are slaughtered in provincially inspected abattoirs.

1.6.4 Poultry

The 1,200 commercial poultry producers in Ontario sell their product under licence on a quota system. Chickens and turkeys are usually housed in confinement using all-in-all-out management. They are typically raised in barns containing several thousand birds. Chickens are marketed at approximately 5 to 8 weeks of age and the majority weigh approximately 1.7 to 2.2 kilograms. Turkeys are marketed at 11 to 18 weeks at weights ranging from 5 to 14 kilograms. Approximately 7.5 percent of the 43 million chickens and turkeys produced in Ontario each year are slaughtered under provincial inspection. There is also an important specialty poultry market in Ontario (eg., quail, pheasants, *etc.*) that is serviced almost exclusively by provincially licensed abattoirs.

1.6.5 Sheep and Goats

Ontario is Canada's largest sheep producing province with about 30 percent of the national breeding flock. There were 264,287 sheep and lambs slaughtered in Ontario in 2003 and about 30,000 goats. Almost all of this slaughter was undertaken in provincially licensed abattoirs.

1.6.6 Aquaculture

In 2003, there were approximately 190 private fish production facilities in Ontario. Rainbow trout is the principal species of fish raised commercially in Ontario with approximately 4,000 tonnes produced annually. There are also small quantities of other species of fish produced, including talapia, arctic char, brook trout, bass and walleye.

1.6.7 Other Species

Other livestock commodities, including farmed deer, buffalo, elk, wild boar, rabbits and a variety of birds, including ostriches, emus, ducks, geese and partridges, are also raised and slaughtered in Ontario, mainly under provincial inspection.

1.7 Free Standing Meat Processors

A "free standing" meat processor is an operation involved in the further processing of meat that is not a licensed abattoir. They cut, grind, cook, repackage, smoke, cure, ferment and can meat for distribution through wholesale or retail outlets. In 2002, OMAF conducted a survey and determined that there were 681 such processors in Ontario. There are no provincial registration or licensing requirements for these operations and currently, any inspection of these premises is carried out by public health inspectors under the auspices of Boards of Health.

1.8 Two Systems of Meat Inspection

The federal and provincial governments both regulate the production of meat in Ontario. Federal involvement arises from its constitutional responsibility for interprovincial and international trade. Therefore, any abattoir or meat processing facility in Ontario that wishes to trade beyond provincial borders must be registered in the federal system and conduct its business in accordance with federal regulations.

Provincially licensed abattoirs are restricted to producing meat for sale and consumption in Ontario and must comply with provincial regulations.

The current structure of both regulatory systems is addressed in more detail in Chapter 2, however, the operation of these parallel systems in Ontario does beg the question of whether the meat produced in one is as wholesome and safe as that produced in the other.

1.9 A Science-Based Approach to Meat Safety

Although food scientists and consumer advocates in the United States had been advocating reform in meat inspection for many years, it was the death of several toddlers from eating *E. coli* tainted hamburgers in 1993 that eventually motivated the Food Safety and Inspection Service (FSIS) of the U.S. Department of Agriculture to modernize its "poke and sniff" inspection system.[6] The FSIS has since moved towards a science-based approach to meat inspection where available scientific information and technology is used to identify and characterize food safety risks and the options for reducing those risks.

In Canada, federal and provincial agriculture ministers began work in 1993 on developing a more integrated science-based approach to food inspection. This work culminated in the development of a blueprint for the Canadian Food Inspection System (CFIS), which identified the need and desire for an integrated system that would be responsive to the needs of industry and consumers.[7] In an effort to move the blueprint forward, the CFIS Implementation Group (CFISIG) was created. CFISIG is composed of representatives of agriculture, health and fisheries departments from federal, provincial and territorial governments.

In 1997, CFISIG brought forward recommendations on how to achieve an integrated food inspection system. Eight working committees were formed to develop model regulations and codes to further the objectives of harmonization and integration as set out in the blueprint. CFISIG's members meet twice a year to develop these codes and regulations by consensus. One of the committees was charged with developing the National Meat and Poultry Regulations and Code (NMPRC).

The NMPRC was first approved in October 2000.[8] It serves as a guide for each participating jurisdiction and was drafted following extensive public consultation with reference to current food safety legislation and international codes of practice.[9]

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[6] This system of "organoleptic" examination relies on a meat inspector's senses of sight, smell and touch to detect any abnormalities or contaminants. This is the system that has been in place from the inception of regulated meat inspection. It is effective in detecting diseases such as tuberculosis and brucellosis that are now extremely rare, but ineffective in detecting deadly microscopic pathogens such as *E. coli* 0157:H7 and *Salmonella*.

[7] Canadian Food Inspection System, *About CFIS*, available from http://www.cfis.agr.ca/english/contcomm/aboutus_e.shtml [accessed 29 April 2004].

[8] Canadian Food Inspection System, *National Meat and Poultry Regulations and Code*, available from http://www.cfis.agr.ca/English/regcode/codes_tbl_e.shtml [accessed 29 April 2004].

The Codex Alimentarius Commission (CAC) is an international body which works to develop international guidelines and food standards and to ensure fair practices with respect to trade in food products. CAC originated in 1963 following the passage of joint resolutions by the United Nations' Food and Agriculture Organization (FAO) and the World Health Organization (WHO).[10] The principal objective of CAC is to protect the health of consumers and facilitate the trade of food by setting international standards which are then recommended for acceptance by national governments. Currently, CAC is comprised of 169 member countries, including Canada.[11] Health Canada is responsible for the coordination of Canada's involvement in CAC.

As part of this process, CAC has developed science-based guidelines, principles and standards for the production and processing of meat. The Codex Alimentarius is a living document that is regularly reviewed and updated by experts in food safety from around the world.

1.10 HACCP

The Hazard Analysis and Critical Control Point (HACCP) system is the risk management tool that has been utilized to bring science to meat production and processing. This system applies a preventative approach as a means of ensuring food safety. HACCP is a system that is designed to identify, evaluate and control food safety hazards. Rather than inspecting products after they are produced, the system identifies critical points of risk in the production process and puts controls at these points in order to prevent the hazards. HACCP has been adopted by the CAC as an international standard for food safety.

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[9] Canadian Food Inspection System, *Canadian Food Inspection System Progress Report*. July, 2000, available from http:\www.cfis.agr.ca/English/prograp/progress-e.shtml [accessed 29 April 2004].

[10] Codex Alimentarius, available from http://www.codexalimentarius.net/ [accessed 29 April 2004].

[11] Health Canada, *Codex Alimentarius in Canada*, available from http://www.hc-sc-gc.ca/food-aliment/friia-raaii/ippi/codex/e_index.html [accessed 29 April 2004]. In Canada, Codex is managed by the interdepartmental committee on the Codex Alimentarius, which is comprised of representatives from Health Canada, the CFIA, the Department of Foreign Affairs and International Trade, and Agriculture and Agri-Food Canada.

The adoption of this system for the management of risks associated with meat production does not eliminate the need for meat inspectors, but does require a cultural adjustment from the traditional "command and control" model to an auditing model where an inspector's function is to monitor the HACCP plan to ensure it is being properly executed.

1.11 Ontario

In 1998, a review of Ontario's food safety system was initiated when it was perceived that Ontario was lagging in moving towards national and international inspection standards. In 2000, the Ontario Food Safety Strategy was devised to modernize the province's food safety system. The result, after much consultation, was the *Food Safety and Quality Act, 2001* (*FSQA*)[12] which was passed by the Legislature on December 5, 2001, but has not yet been proclaimed. The stated purposes of the *FSQA* are to provide for the quality and safety of food and the management of food safety risks in Ontario.[13]

1.12 Farm to Fork

I was not long into this Review when I realized that "farm to fork" was the mantra of modern food safety. Potential hazards lurk along the entire route from production to consumption. Effective food safety requires consistent, coordinated vigilance from beginning to end. Very little is accomplished if food safety risks are addressed at the abattoir, but ignored in the home. A sophisticated risk management program at a poultry plant will not save the consumer who fails to cook his or her chicken properly. In writing this Report, I have adopted the farm to fork model and will attempt to identify and address the meat safety issues that arise as the product proceeds along the continuum.

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[12] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20.
[13] *Ibid.*, s. 2.

1.13 Principles and Priorities

The *Interim Report of the SARS Commission* was released this past April. In his report, Justice Archie Campbell addressed the tension in public health between infectious disease control and long-term population health promotion. At page 199, he lists five reasons why protection against infectious disease should be the first priority:

> *The first is that the threat from infectious disease is direct and immediate. The second is that an outbreak of infectious disease, if not controlled, can bring the province to its knees within days or weeks, a threat not posed by lifestyle diseases. The third is that infectious disease catches the direct attention and immediate concern of the public in a way that long-term health promotion does not. It is essential in an infectious disease outbreak that the public be satisfied that they are getting solid information from the government and that everything possible is being done to contain the disease. The fourth is that infectious disease prevention requires an immediate overall response because it moves rapidly in the group and spreads quickly from one municipality to another and from province to province and country to country, thus engaging an international interest. The fifth is that health promotion depends largely on partnerships outside the health system between public health and local community agencies like schools and advocacy groups, allies and resources not available to infectious disease control which must stand largely on its own.*
>
> *For these five reasons safe water, safe food, and protection against infectious disease should be the first priorities of Ontario's public health system.*[14]

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[14] Ontario, *The SARS Commission Interim Report: SARS and Public Health In Ontario,* (15 April 2004).

In Part Two of the *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water*, Associate Chief Justice Dennis O'Connor sets out the general principles he adhered to in his report:

> *While it is not possible to utterly remove all risk from a water system, the recommendations' overall goal is to ensure that Ontario's drinking water systems deliver water with a level of risk so negligible that a reasonable and informed person would feel safe drinking the water.*
>
> *The risks of unsafe drinking water can be reduced to a negligible level by simultaneously introducing a number of measures: by placing multiple barriers aimed at preventing contaminants from reaching consumers, by adopting a cautious approach to making decisions that affect drinking water safety, by ensuring that water providers apply sound quality management and operating systems, and by providing for effective provincial government regulation and oversight.*[15]

By substituting meat for drinking water, one has a template for the delivery of safe meat. The goal of the recommendations in this Report is the same – to ensure that meat produced in provincially licensed facilities is delivered with a level of risk so negligible that a reasonable and informed person will feel safe eating it.

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[15] Ontario, *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water*, (Toronto: Queens Printer for Ontario, 2002), Part 2, p.5.

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Chapter 2 - Current Structure of Meat Regulation in Ontario

2.1 Introduction

The purpose of this chapter is to address:

- the constitutional division of responsibility for the delivery of safe meat;
- the existing regulatory regime in Ontario; and
- the restructuring of the system through the Ontario Food Safety Strategy and the *Food Safety and Quality Act, 2001 (FSQA)*.[1]

2.2 Constitutional Responsibility for Safe Meat

The delivery of safe meat in Ontario is a responsibility that is shared by the federal and provincial governments. There is no specific legislative power allocated to either level of government for meat inspection, however, both have concurrent jurisdiction over agriculture pursuant to section 95 of the *Constitution Act, 1867* and there are several powers listed in sections 91 and 92 that support the roles each government has assumed in the area. Food safety is, of course, a public health issue, and although health is not referred to as a specific head of power in the Constitution, it is an area in which both levels of government have exercised complementary legislative authority.

2.2.1 Federal Jurisdiction

A number of federal powers, including the broad peace, order and good government power and the federal spending powers, authorize federal involvement in this subject matter, but the participation of the federal government in meat inspection specifically, and food safety generally, arises from its jurisdiction over trade and commerce (s. 91(2)) as well as its powers in the area of criminal law (s. 91(27)). Securing foreign markets for Canadian meat was the principal motivation for the enactment of the *Meat and Canned Goods Act*[2] in 1907 which created a system of inspection for all meat traded both interprovincially and internationally. These provisions have been modernized and continued in the *Meat Inspection Act* (Canada)[3] which, in sections 7 and 8, specifically prohibit the export and interprovincial sale of any meat product that has not been prepared in accordance with that statute and its regulations. Consequently, any meat produced in Ontario for consumption elsewhere must be processed in a federally regulated plant.

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[1] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20, received Royal Assent, December 5, 2001 but not yet proclaimed.

[2] 6-7 Edward VII, c. 27.

[3] *Meat Inspection Act*, R.S.C. 1985, c. 25 (1st Supp.).

The federal government has also relied on its criminal law powers to enact legislation that prohibits the manufacture and sale of dangerous, adulterated or misbranded products in Canada.[4]

2.2.2 Provincial Jurisdiction

The Province of Ontario regulates meat that is processed in Ontario for sale and consumption within its boundaries. The powers in section 92 of the *Constitution Act, 1867* that permit the Legislature to exercise this jurisdiction are local works and undertakings (s. 92(10)), property and civil rights (s. 92(13)) and matters of a local and private nature (s. 92(16)).

Ontario had no legislation regulating meat inspection province-wide until the 1960s when the *Meat Inspection Act* (Ontario)[5] (*MIA*) and *Dead Animal Disposal Act*[6] (*DADA*) were enacted. The apparent impetus for this legislation came from a number of well publicized prosecutions of persons charged with selling meat from dead animals for human consumption. Consumer concerns at the time prompted retail meat markets to abandon the then uninspected provincial abattoirs in favour of federally inspected facilities. The adverse economic impact on Ontario meat producers was substantial. Many chose to protect their markets by becoming federally registered establishments while others closed their doors.[7] Notwithstanding these events, the production of meat in provincial abattoirs has continued and still plays a significant role in the agricultural economy of the province. There are currently 191 provincially licensed abattoirs in Ontario.

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[4] *Food and Drug Act*, R.S.C. 1985, c. F-27.

[5] *Meat Inspection Act (Ontario)*, R.S.O. 1990, c. M.5.

[6] *Dead Animal Disposal Act*, R.S.O. 1990, c. D.3.

[7] I. MacLachlan, *Kill and Chill: Restructuring Canada's Beef Commodity Chain*, (Toronto: University of Toronto Press, 2001).

2.2.3 Municipal Jurisdiction

The Legislature of Ontario has also delegated a role in the delivery of safe food to municipalities. Under the provisions of the *Municipal Act, 2001*,[8] municipalities in Ontario are empowered to establish local boards of health, which are required to provide inspection services for food premises pursuant to the *Health Protection and Promotion Act*[9] (*HPPA*).

2.3 The Current Federal System

At the federal level, meat inspection has been undertaken by the Canadian Food Inspection Agency (CFIA) since 1997.[10] At that time, the government of Canada integrated the delivery of inspection and quarantine services formerly provided by Agriculture and Agri-Food Canada, Health Canada, Industry Canada and Fisheries and Oceans Canada. The CFIA is a legislated, independent body corporate led by a President who reports to the Minister of Agriculture and Agri-Food.

Between 1970 and 1985, a series of reports identified the need for a single agency to better coordinate food inspection. In response, the Interdepartmental Committee on Food Regulation was established in 1986 to attempt to resolve some of the problems with the existing federal system. In 1995, the Office of Food Inspection Systems was established to review organizational options and consult stakeholders. This process resulted in the creation of the CFIA.[11]

In the realm of food safety, the CFIA ensures that manufacturers, importers, distributors and producers comply with federal regulations and standards governing the safety, quality, handling, identification, processing, packaging and labelling of food.[12] The Minister of Health continues to establish policies and standards for the safety and nutritional quality of food sold in Canada.

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[8] *Municipal Act, 2001*, S.O. 2001, c. 25.

[9] *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.

[10] *Canadian Food Inspection Agency Act*, S.C. 1997, c. 6.

[11] *Report of the Auditor General of Canada, Canadian Food Inspection Agency– Food Inspection Programs*, (December 2000) para. 25.15.

About 85 percent by volume of all meat processed in Ontario is produced in 33 facilities that are registered under the *Meat Inspection Act* (Canada) and inspected by CFIA inspectors.[13]

2.4 The Current Provincial System

There are several provincial ministries with responsibilities relevant to food safety in Ontario and a substantial body of legislation that delineates those responsibilities.

2.4.1 Ministry of Agriculture and Food

The Ministry of Agriculture and Food (OMAF) is currently the principal participant in the regulation of meat production.

There are three divisions (Policy & Farm Finance, Food Industry and Agricultural & Rural) that play an important role in the delivery of safe food and each division has one branch under the management of a Director that has specific food safety responsibilities, namely, the Food Inspection Branch (meat inspection), the Food Safety Policy Branch (policy development) and the Livestock Technology Branch (on-farm programs).

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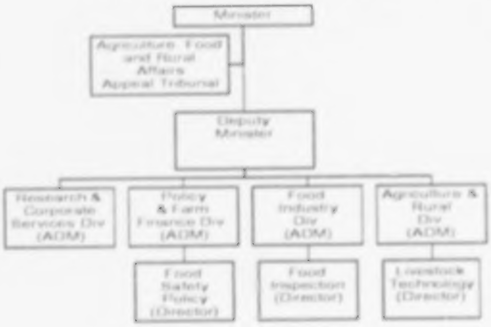
[12] The CFIA is responsible for the administration and enforcement of the following federal Acts: *Administrative Monetary Penalties Act, Canada Agricultural Products Act, Canadian Food Inspection Agency Act, Feeds Act, Fertilizers Act, Fish Inspection Act, Health of Animals Act, Meat Inspection Act, Plant Breeders' Rights Act, Plant Protection Act, Seeds Act*, the *Consumer Packaging and Labelling Act* as it relates to food and the enforcement of the *Food and Drugs Act* as it relates to food. CFIA, *Fact Sheet*, available from http://www.inspection.gc.ca/english/corpaffr/publications/prog/agence.shtml; [accessed 29 April 2004].

[13] *2001 Annual Report of the Provincial Auditor of Ontario – Food Industry Program*, (Toronto: Queens Printer for Ontario, 2003), s. 3.01.


Ministry of Agriculture and Food - Current

Minister
Agriculture Food and Rural Affairs Appeal Tribunal
Deputy Minister
Research & Corporate Services Div (ADM)
Policy & Farm Finance Div (ADM)
Food Industry Div (ADM)
Agriculture & Rural Div (ADM)
Food Safety Policy (Director)
Food Inspection (Director)
Livestock Technology (Director)

Although OMAF has responsibility for administering numerous statutes,[14] the *MIA*, *DADA* and *Livestock Community Sales Act*[15] (*LCSA*) are the most significant in the regulation of meat production.

2.4.1.1 Meat Inspection Act (Ontario)

The apparent purpose of the *MIA* is to provide for the production of safe meat for human consumption under proper conditions in appropriately designed and maintained facilities.

The *MIA* and O. Reg. 632/92, as amended by O. Reg. 319/99, require that the slaughter of any animal for the production of meat be undertaken in a prescribed, humane manner at a facility licensed for that purpose where an inspector is present unless the animal is being slaughtered by a livestock producer for consumption by that producer and his or her immediate family.

The regulations specify the facilities and equipment required in a slaughter plant and prescribe rules for the operation and maintenance of such plants to ensure that safe production standards are met.

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[14] These include: *Edible Oil Products Act*, RS.O. 1990, c. E.1; *Milk Act*, R.S.O. 1990, c. M.12; *Livestock Medicines Act*, R.S.O. 1990, c. L.23; *Beef Cattle Marketing Act*, R.S.O. 1990, c. B.5; *Farm Products Grades and Sales Act*, R.S.O. 1990, c. F.8; *Farm Products Marketing Act*, R.S.O. 1990, c .F.9; and *Livestock and Livestock Products Act*, R.S.O. 1990, c. L.20

[15] *Livestock Community Sales Act*, R.S.O. 1990, c. L.22.

2.4.1.2 Dead Animal Disposal Act

The *DADA* and O. Reg. 525/96 deal with the disposition of dead and fallen animals. The statute is designed to ensure that all dead animals are segregated from healthy livestock and meat intended for human consumption. Collectors of deadstock and operators of receiving and rendering plants, who are all licensed under the *DADA*, are prohibited from operating an abattoir and the processing of any dead animal for sale as meat for human consumption is prohibited.

2.4.1.3 Livestock Community Sales Act

The *LCSA* and O. Reg. 729 provide for the licensing of community sales of consigned livestock in Ontario. The *LCSA* and its regulations establish an inspection system whereby appointed veterinarians and inspectors examine livestock, facilities and handling techniques to ensure that livestock is marketed in a safe and humane manner. Diseased and disabled animals are identified and processed in accordance with a prescribed protocol.

2.4.2 Ministry of Health and Long-Term Care

The Ministry of Health and Long-Term Care administers the *HPPA*. The purpose of this statute is to provide for the organization and delivery of public health programs and services, the prevention of the spread of disease and the promotion and protection of the health of the people of Ontario.

There are 37 health units in Ontario. A health unit is a geographic area over which a board of health has jurisdiction. Under the *HPPA*,[16] the Minister may publish guidelines for the provision of mandatory health programs and services and every board of health is required to comply with those guidelines. Each health unit has a Medical Officer of Health (MOH) who has a statutory duty to inspect or cause the inspection of food premises and any food or equipment found on those premises. In the normal course, the inspection of food premises is undertaken by public health inspectors under the direction of a MOH. Food premises are defined in the *HPPA* as premises where food is manufactured, processed, prepared, stored, or offered for sale, but does not include a private residence. The facilities currently subject to such inspections include traditional butcher shops, restaurants, supermarkets, variety stores and premises where ready to eat meats are cured, smoked and fermented.

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[16] *HPPA*, *supra* note 9, ss. 1 & 16.

2.4.3 Ministry of Natural Resources

The Ministry of Natural Resources (MNR) has responsibility under the *Fish Inspection Act*[17] (*FIA*) to regulate the commercial sale and processing of fish intended for human consumption. The *FIA* prohibits the sale of any fish intended for human consumption that is tainted, decomposed or unwholesome and provides for the inspection of premises where fish are handled, graded, processed or stored. Regulations made pursuant to the *FIA* set out operating requirements for premises that process fish and provide general construction and equipment requirements for such establishments. There is currently no inspection program in place for the processing facilities apart from that administered by the local health units for food premises.

The MNR also administers the *Freshwater Fish Marketing Act*[18] under which the Freshwater Fish Marketing Corporation is constituted as the body that controls the selling and buying of fish in designated parts of Ontario.

The MNR plays an important role in the enforcement of the *MIA* and *DADA* through a broad Cooperative Agreement and more specifically a Service Level Agreement it has entered into with OMAF. Under the terms of that Agreement, the MNR provides investigative services and resources for the prosecution of offenders who contravene the provisions of those statutes. This arrangement is reviewed and considered in more detail in Chapter 11.

2.5 Ontario Food Safety Strategy and the Food Safety and Quality Act, 2001

The Ontario Food Safety Strategy (OFSS) was launched in October 2000[19] following a review of Ontario's food safety system that commenced in 1998. At that time, it was acknowledged that food safety hazards and risks were increasing for a variety of reasons[20] and while food science was responding to meet these challenges, there were elements of Ontario's system for assessing food safety that were not keeping pace with national and international inspection standards where science-based risk management programs were being introduced to promote the safe delivery of food from production through consumption.

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[17] *Fish Inspection Act*, R.S.O. 1990, c. F.18 and R.R.O. 1990, Reg. 456.

[18] *Freshwater Fish Marketing Act (Ontario)*, R.S.O. 1990, c. F.33.

[19] The development and implementation of the Ontario Food Safety Strategy was led by OMAF in partnership with MOHLTC, MOE, MNR, local boards of health, CFIA, Health Canada and Agriculture and Agri-Food Canada.

The advantages in pursuing this strategy were manifest. The consumer would be afforded greater protection, industry would benefit from enhanced consumer confidence and government would benefit from the restoration of public confidence as well as the potential reduction of health costs associated with foodborne illnesses.

Under OFSS, improvements have been made in a number of areas:

- scientific support of inspection programs has been strengthened with risk assessments being conducted to determine the ranking of food safety risks and microbial and chemical baseline studies being conducted to assess the levels of food safety hazards;
- food safety programs for farmers and meat processors have been developed;
- a data management system (Food Safety Decisions Support System) has been introduced to manage risks and improve response time;
- cooperative agreements with other government authorities have been entered into that focus and coordinate inter-jurisdictional food safety responsibilities; and
- reorganization of the compliance and enforcement programs has been undertaken.

However, the backbone of the OFSS initiative, the *FSQA*, while enacted on December 5, 2001, has yet to be proclaimed. This legislation was the product of an extensive consultative process undertaken as part of the OFSS. The purpose was to consolidate and modernize the food safety and quality features of several existing statutes[21] to provide the framework for regulations that would require adherence to science-based production and inspection standards.

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[20] Changing food consumption patterns, such as ready to eat foods; a larger at-risk population; and increased pathogen virulence and drug resistance.

The statute is designed to implement food safety inspection programs that will complement and support the food safety programs provided by the CFIA and local health units. The goals of the *FSQA* as identified by OMAF are:

- to prevent the distribution and sale of foods that are contaminated, unfit for human consumption or pose a human health risk;
- to prevent fraud or misrepresentation in the production and sale of food products;
- to engage industry in the process of ensuring that the food it produces, distributes and sells is safe;
- to give government the necessary enforcement tools to ensure industry meets its obligations under the legislation; and
- to provide government with the appropriate authority to investigate and control food safety threats or outbreaks of foodborne illness.

The National Meat and Poultry Regulations and Code (NMPRC) are model regulations that have been developed nationally by federal, provincial and territorial health and agriculture representatives in consultation with industry to guide all jurisdictions in developing consistent food safety standards across the country. OMAF has proposed that the meat inspection regulations under the *FSQA* should be consistent with the NMPRC. Once implemented, these regulations would govern the slaughter of livestock, the processing, packaging and labelling of meat and the disposal of inedible and condemned material from abattoirs and meat processors. They would also expand inspection to an additional 700 free standing meat processors, provide for microbial performance standards, food handler training, the implementation of risk management plans and other food safety measures.

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[21] *Milk Act; Meat Inspection Act; Farm Products Grades and Sales Act; Livestock and Livestock Products Act; Edible Oil Products Act; Fish Inspection Act;* and *Dead Animal Disposal Act.*

However, there is, as of now, no policy approval for OMAF to proceed with the implementation of such regulations.

In subsequent chapters, I will propose certain amendments or additions to the *FSQA* that I believe will enhance its effectiveness. Nonetheless, I am satisfied for reasons that will emerge in the balance of this Report that it, together with regulations that are equivalent to the NMPRC, will provide a sound and comprehensive foundation for a reliable meat safety system in Ontario.

I recommend that the *Food Safety and Quality Act, 2001* be proclaimed without further delay with the promulgation of regulations that are equivalent to the National Meat and Poultry Regulations and Code.

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Chapter 3 - A Science-Based Approach to Food Safety

3.1 Introduction

Food safety is by no means solely an Ontario or even a Canadian issue. It is a subject that has received and continues to receive much study and debate worldwide. In developing a first class science-based food safety system for Ontario, there is no need to undertake extensive new scientific study on many issues as much research has already been done. There can be no dispute that the people of Ontario are entitled to the benefit of a food safety system which is science-based to ensure that it will produce food that is wholesome and safe to consume.

The term "science-based" is used to describe a number of "science" features. As this chapter illustrates, food hazards in meat and poultry arise from biological, chemical and physical hazards. Many of these hazards cannot be seen by the naked eye. Therefore, understanding the "science of biology", the conditions that promote the growth of microorganisms, and the spread of animal disease helps us to predict where problems may arise and what measures can be taken to prevent them or reduce their impact. Understanding the "science of chemistry", particularly how chemicals such as drugs and feed are processed and metabolized in an animal's body, helps us to predict the point in time at which there should be no unsafe residues. Even with respect to physical hazards, science has a role in their avoidance, detection and elimination from our food.

There are a number of benefits to a science-based approach. Science is not just about what we know about a problem; it is also a way of approaching problems. It involves making observations and making and testing predictions. It tries to make a causal link. A science-based regulatory system contains rules that have been chosen because there is evidence that by following them, safer food will result. Because science-based approaches can be measured, they can be used to develop universally accepted food safety standards.

Science also helps us evaluate whether our food safety objectives are being met. Baseline studies, microbial performance standards and other testing can help determine whether reductions in foodborne pathogens are being achieved. The science of epidemiology helps analyze foodborne diseases in humans, to determine whether food safety efforts result in less illness. Scientific research often results in new technology and innovation.

In developing a public policy framework for a food safety program, it is expected that the best available scientific knowledge and technology will be used to identify and characterize the food safety risks and the options to reduce them. While science is an important element in developing food safety policy it is not the only consideration. Social values, ethics, consumer demands, economic and political considerations and other factors will impact these policy decisions.[1]

Many international organizations have developed and adopted rules and procedures with respect to food safety including meat hygiene. International bodies including the Food and Agricultural Organization of the United Nations (FAO), the World Health Organization (WHO), the International Office of Epizootics (OIE), and the World Trade Organization (WTO) have played a leading role in developing science-based standards governing food products. These standards were created to facilitate the implementation and harmonization of international standards to protect the health of consumers and to facilitate safe international trade of food products.

The development, implementation and operation of an effective science-based food safety program is complex. First, a good science-based food safety system must cross all aspects of the food production continuum from primary production to the consumer. Hence, the use of such descriptive phrases as "farm to fork", "farm to table", "farm gate to food plate" and others. Secondly, a good science-based food safety system relies upon the participation of all of the key stakeholders including governments, primary and secondary producers, retailers and consumers.

In the last ten years, there has been extensive progress in the development and implementation of food safety programs worldwide. Many programs have been voluntarily implemented by industry. Industry organizations have played a leading role in their development in Canada and elsewhere.

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[1] *Report of the Expert Advisory Panel, The Scientific and Regulatory Basis of Meat Inspection in Ontario* (May 2004), p. 93 [hereinafter *Expert Advisory Panel Report*].

Increasingly, food safety programs are being developed and implemented by governments, often with industry support. Most government programs are voluntary, however, many are becoming mandatory.

The purpose of this chapter is to outline the key issues related to the science of food safety (focusing on meat), to outline the fundamentals of a good science-based food safety system, and outline the steps that have been taken to implement such systems across Canada, in Ontario, and in some other jurisdictions. I will make recommendations which, in my view, will ensure the safety of meat in Ontario.

3.2 Fundamental Principles of Meat Safety

In designing a science-based food safety system for Ontario, it is important to identify the key underlying principles and goals that should guide it. To find these fundamental principles, we need not look much further than the Codex Alimentarius Commission (CAC). The Codex Alimentarius (Codex) (which means "food code" or "food law") is a set of food standards and codes of practices developed by consensus of CAC members, including Canada. Codex standards, guidelines and recommendations are designed to ensure that food products are not harmful to the consumer and can be traded safely between countries.

The relevant Codex general principles of meat hygiene (meat safety) may be summarized as follows:

- meat must be safe and suitable for human consumption with government, industry and consumers all having a role in achieving this outcome;[2]
- governments must establish regulatory meat hygiene requirements, must enforce them and verify compliance. It is the responsibility of the operator to produce meat that is safe and suitable in accordance with these regulatory meat hygiene requirements;

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[2] Specific meat hygiene requirements should address biological, chemical and physical hazards; and pathophysiological and other characteristics associated with suitability for human consumption. Codex Alimentarius Commission, *General Principles of Meat Hygiene*, CAC/GL-52 (2003).

- meat hygiene programs should have, as a primary goal, the protection of public health and should be based on scientific evaluation of meat-borne risks to human health and take into account all relevant food safety hazards identified by research, monitoring, surveillance and other activities;
- the principles of food safety risk analysis should be incorporated into the design and implementation of meat hygiene programs;
- governments should formulate food safety objectives (FSOs) according to a risk-based approach so as to objectively measure the level of hazard control that is required to meet public health goals;
- meat hygiene requirements should control hazards to the greatest extent practicable throughout the entire food chain;
- HACCP principles (to be defined later in this chapter) should be applied in the design and implementation of meat hygiene measures throughout the entire food chain;
- governments should define the role of all personnel involved in meat hygiene activities including veterinarians, inspectors and operators;
- all those responsible for meat hygiene should carry out their activities with the appropriate training, knowledge, skills and ability;
- governments should verify that all establishments have adequate systems in place to trace and recall meat from the food chain;
- communication with consumers and other interested parties is important and should be undertaken where appropriate;
- the monitoring and surveillance of animal and human populations should be undertaken and the results used to review and/or modify meat hygiene requirements whenever necessary; and
- governments should recognize the equivalence of alternative hygiene measures where appropriate and promulgate meat hygiene measures that achieve required outcomes in terms of safety and suitability.

These principles provide a solid foundation for meat hygiene and apply across the food continuum from primary production through to consumption. I believe these principles must form part of the foundation of a good science-based food safety system for Ontario.

3.3 The Role of Government in a Science-Based Food Safety System

Without question, governments play an important role in a science-based food safety system including by:

- protecting public health by reducing the risk of foodborne illness;
- protecting consumers from unsanitary, unwholesome, mislabelled or adulterated food;
- providing assurance that food is suitable for human consumption;
- contributing to economic development by maintaining consumer confidence in the food system and providing a sound regulatory foundation for domestic and international trade in food; and
- providing health education programs to effectively communicate the principles of food hygiene to industry and consumers.[3]

A food safety system requires scientifically sound, achievable and enforceable laws and regulations that ensure food safety. Laws and regulations addressing food safety should contain the following elements:

- provide a high level of health protection;
- clear definitions to increase consistency and compliance;
- be based on high quality, transparent, independent scientific advice following risk assessment, risk management and risk communication;

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[3] FAO & WHO, *Assuring Food Safety and Quality: Guidelines for strengthening national food control systems* (2003), p. 6; Codex Alimentarius Commission, *Recommended International Code of Practice – General Principles of Food Hygiene*, CAC/RCP 1-1969, Rev. 3 (1997), Amd. (1999).

- provisions to take proactive preventative steps where an unacceptable level of risk to health has been identified even where a full risk assessment cannot be performed;
- provisions for the right of consumers to have access to accurate and sufficient information;
- provide for the tracing of food products;
- provisions indicating the primary responsibility for food safety and quality rests with producers and processors;
- an obligation to ensure that only safe and fairly presented food is placed on the market;
- measures to ensure compliance and enable enforcement; and
- where food is to be shipped outside of Canada, recognize the associated international obligations.[4]

3.4 Risk Analysis in the Development of Public Policy

Public policy is developed through a process of risk analysis. Risk analysis is a process that includes risk assessment, risk management and risk communication.[5] It is now well accepted that these three components of risk analysis cannot be separated, but rather are integrated and that communication involves the multi-directional flow of information.[6]

3.4.1 Risk Assessment

In respect of foodborne illness, risk is a measure of the probability that a certain adverse health effect will occur as a result of a food hazard and the severity of that effect. A risk assessment may be defined as the use of scientific data to identify, characterize and measure hazards, assess exposure, and characterize the risk involved with a particular food product.[7]

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[4] FAO & WHO, *Assuring Food Safety and Quality*, supra note 3, p. 61.

[5] *Expert Advisory Panel Report, supra* note 1, p. 89-96; Codex Alimentarius Commission, *Draft Principles for the Risk Analysis of Foods Derived from Modern Technology*, available from http://www.codexalimentarius.net/biotech/en/ra_fbt.htm [accessed 17 May 2004]

[6] D. Powell et al., *The impact of media on public perception and policy development related to meat inspection in Ontario* (June 2004). This report was prepared by members of the Department of Agriculture, University of Guelph at my request.

[7] Institute of Food Technologists, *Expert Report on Emerging Microbiological Food Safety Issues: Implications for Control in the 21st Century* (Released 20 February 2002), p. 67; Codex Alimentarius Commission, *Draft Principles for the Risk Analysis of Foods Derived from Modern Technology, supra* note 5.

The questions that should be asked include: What can go wrong? How likely is a bad outcome? When will it occur? What is the likely significance of the loss?[8] Typically, risk assessment models seek to use available scientific data to determine, in either a qualitative or quantitative manner, the probability or impact of the adverse health effect occurring. While quantitative risk assessments are preferable, they can only be done if the necessary expertise, time, data and methodology are available. For that reason, a strong investigative research and surveillance infrastructure is needed to support the risk assessment process. In dealing with meat safety, two necessary components are foodborne disease surveillance and baseline studies of hazards in foods.[9]

3.4.2 Risk Management

Risk management is defined in the Codex as the process of weighing policy alternatives in light of the results of risk assessment and, as required, selecting and implementing appropriate control options including regulatory measures.[10]

3.4.3 Risk Communication

Risk communication is the part of risk analysis that involves the exchange of information and opinions, concerns, risk and risk-related factors designed to lead to a better decision-making process.[11] It is a form of consultation that allows stakeholders an opportunity to become informed and provide input and critical review. It also involves the communication of a policy decision to those who will be affected by it. Risk communication is an important factor in achieving stakeholder acceptance and compliance with the ultimate policy decision.[12] Failure to undertake proper risk communication can defeat the most well-intentioned and well-crafted policies and programs.[13]

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[8] Codex Alimentarius Commission, *General Principles of Meat Hygiene*, *supra* note 2.

[9] *Expert Advisory Panel Report*, *supra* note 1, p. 91.

[10] Codex Alimentarius Commission, *Principles and Guidelines for the Conduct of Microbiological Risk Assessment*, CAC/GL-30 (1999); Codex Alimentarius Commission, *Draft Principles for the Risk Analysis of Foods Derived from Modern Technology*, *supra* note 5.

[11] *Ibid.*

[12] *Expert Advisory Panel Report*, *supra* note 1, p. 92.

3.4.4 What is an Appropriate Level of Risk?

In dealing with food safety, we would all hope for the absolute elimination of all food hazards and, absent other considerations, advocate a policy of zero tolerance. Realistically, zero tolerance with the meaning of complete removal of all hazards is not achievable or affordable. Consumers of meat are likely prepared to accept a certain level of risk, but there is a level beyond which they will not go. This concept of acceptable risk is not purely scientific and involves consideration of other factors including societal values and, most often, the availability of resources. It falls to our policy makers to determine what level of risk the public will accept and how much the public is prepared to pay to achieve it. As I indicated in the introduction to this Report, the goal is to develop a meat safety policy that will ensure the level of risk associated with consuming meat in Ontario is so negligible that a reasonable and informed person will feel safe eating it.

After completing a risk assessment and a risk management analysis, governments responsible for food safety need to establish FSOs. These FSOs define specific values or targets to be used in achieving the public health goals by regulators and industry.

3.4.5 Ontario's Food Safety Vision, Goals and Objectives

The provincial government, through the Ontario Ministry of Agriculture and Food's (OMAF) Food Industry Division, has publicly declared its vision and mission, core strategies and guiding principles in respect of food safety. Its vision is that of *"Ontario's food industry – an innovative, responsive world leader providing safe, superior value products."* Its declared mission is to *"provide leadership, support and a regulatory framework that assures Ontario consumers a safe food supply and promotes growth and competitiveness of our food industry."* Out of three core strategies one relates to food safety, namely, *"to minimize the risk to the public from foodborne illness."*[14]

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[13] *Ibid.*, p. 129.

OMAF's stated goals to achieve this core strategy are as follows:

- develop risk-based food safety standards and regulatory programs that provide, at minimum, the same level of protection as federal standards for those commodities specified under provincial legislation and regulations;
- ensure the delivery of food safety regulatory programs with an emphasis on increasing industry accountability;
- ensure the development and delivery of education and communication programs to increase understanding and management of the risk of foodborne illness;
- coordinate with federal, provincial and municipal authorities to ensure a seamless food safety system; and
- develop and maintain the ability to deal with high priority food safety issues/emergencies.

There can be little dispute with the general language stated in these public statements of OMAF's vision, strategy and goals. What is absent, however, are specific strategies, business plans and FSOs that identify how the province intends to accomplish its overall strategy.

The last business plan released by OMAF was for 2002 – 2003 and it contained very little in respect of food safety.[15] Under the business plan, OMAF was to develop and introduce regulations under the *Food Safety and Quality Act, 2001 (FSQA)*[16] to strengthen Ontario's food safety system and to work with industry to improve compliance with safety standards. Of ten key performance measures, only two related to food safety. Overall food safety does not appear to be a significant priority within the business plan.

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[14] The other two core strategies are to enhance domestic and global market penetration of Ontario grown/processed agri-foods and to increase attraction and retention of investment in the agri-food sector.

[15] OMAF, *Business Plan 2002-2003*, available from http://www.gov.on.ca/OMAFRA/english/about/BusPlan2003/index.html [accessed 6 June 2004]

[16] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20, received royal assent December 5, 2001 but not yet proclaimed.

What is strikingly absent in Ontario is a clearly articulated, transparent and well-defined strategy for the province that publicly outlines the government's plans, strategies and objectives for food safety and the reduction of foodborne illness.

In October 2000, the provincial government approved the Ontario Food Safety Strategy (OFSS). OFSS is described by OMAF as an ongoing process to improve Ontario's food safety system by enhancing government's capacity to protect public health, address gaps in the food inspection system and increase the marketability of Ontario's food products. The OFSS vision was to create a science-based system that links the food chain from "field-to-fork". OFSS was developed to be a partnership between government ministries, local health boards and federal authorities. Ontario has spent in excess of $50 million on OFSS initiatives since 2000, yet there has been no public reporting on these initiatives and their measure of success.

OMAF advised the Review that under OFSS, improvements have been made in three strategic areas namely, science and analysis, field operations and strategic development and coordination.[17]

OMAF's ability to communicate its strategies and objectives may have been hampered by the delay in proclamation of the *FSQA* and the enactment of new regulations. Policy and strategy cannot be publicly communicated or implemented until the underlying policy decisions are made and the government commits to making the necessary resources available.

The provincial government has a significant responsibility for the safety of meat and other food in Ontario. There is a corresponding public interest in the safety of the food produced and consumed in Ontario. There needs to be open and regular reporting by the provincial government to the people of Ontario.

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[17] Science and analysis initiatives include baseline microbiological studies, funding for food safety research projects, scientific support enhancements of the food inspection program and food safety database development. Field operation improvements include strengthening of compliance, enforcements, monitoring of deadstock/rendering industry and development of the HACCP Advantage Program. Strategic development and coordination improvements include strategic initiatives related to the development of regulations under the *FSQA* and inter-agency coordination.

The United States Department of Agriculture (USDA) is required by law to deliver annual performance reports to Congress and to the American people setting out:

- its strategic plan that depicts long-term goals and strategies;
- its annual performance plan that outlines year-to-year strategies and targets for achieving its long-term goals; and
- a performance and accountability report that shows how well it did in reaching the goals established in the previous fiscal year.[18]

Similarly, the Food Safety Inspection Service (FSIS) in the U.S. delivers annual program performance reports that describe its specific strategic goals and objectives, strategies and outcomes.

In Canada, the Food Directorate[19] delivered its first report in 2001 on the science and research activities of the branch. The comprehensive report set out detailed descriptions of the mandates, missions, roles and responsibilities of the branch together with detail of the laboratory and non-laboratory based science being undertaken. In addition, the Food Directorate also recently delivered its first annual report on program priorities and achievements.[20] This report set out six key strategies and described the work of the directorate with a detailed list of prioritized projects in the areas of policy/regulatory development, evaluation and risk benefit analysis, intelligence (research and surveillance) and health outcomes. For each priority, there is a description of the activity and projects including milestones for completion. The report also lists the achievements in the past year and provides a public accounting of the Food Directorate's work.

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[18] USDA, *Performance and Accountability Report for FY 2003*, available from http://www.usda.gov/ocfo/usdarpt/usdarpt.htm [accessed 2 June 2004].

[19] The Food Directorate is part of Health Canada's Health Products and Food Branch and has primary responsibility of establishing policies and standards related to food safety and nutrition.

[20] Health Canada, Food Directorate, *First Annual Report on Program Priorities & Achievements, 2003-2004* (December 2003), available from http://www.hc-sc.gc.ca/food-aliment/dg/e_rpt_priorities_achievements_dec_2003.pdf [accessed 6 June 2004].

The Canadian Food Inspection Agency (CFIA) is mandated by its enabling legislation to deliver an annual report outlining its activities and the results achieved.[21] The Auditor General is required to include a summary statement assessing the fairness and reliability of the reported information.

The citizens of Ontario should expect similar reporting from the Government of Ontario.

I recommend that the provincial government publicly articulate its policy, targets and goals in respect of food safety including food safety objectives. The province should also develop and make public a business plan for its food safety initiatives with appropriate methods to measure the results and deliver an annual public report outlining its program priorities, strategies, objectives and achievements.

3.5 Foodborne Illnesses

Needless to say, the primary reason for having any food safety system is to ensure that the food consumed by the public is safe, in that it will not cause harm to health. The information which has been presented to me together with the advice of the Expert Advisory Panel leads me to conclude that the meat produced and consumed in Ontario is, for the most part, safe and free of hazardous contaminants.[22] On the other hand, foodborne illness remains a significant public health issue in Ontario. Since we tend to think of foodborne illness as a problem in other parts of the world, many would be surprised at the prevalence of foodborne illness in North America.

The Expert Advisory Panel has, in its report, outlined the public health hazards associated with meat consumption and the trends in foodborne illness.[23] For the purposes of understanding the rationale for my recommendations, I provide an overview of these issues.

3.5.1 Prevalence of Foodborne Illness

It is difficult to measure the true extent of foodborne illnesses. Many ill persons do not seek medical attention for symptoms that may last no longer than a day or two. Others seek medical attention, but are not tested and consequently, the foodborne illness goes undiagnosed. The Centers for Disease Control and Prevention (CDC) in the U.S. has concluded that there is substantial under reporting of foodborne illness. The CDC estimates for every case of *Salmonella*-related illness diagnosed and reported to public health authorities, 38 cases actually occurred.[24] An Ontario study estimates that only one in 17 illness caused by *Campylobacter, Salmonella* and *Yersinia* is reported and one in nine for *Shigella* illnesses.[25] In addition, many foodborne infections are not identified by routine laboratory procedures and require specialized equipment and testing that is generally not available. As a result, the data used to measure the prevalence of foodborne illness usually involves projections in respect of illnesses that are unreported or reported, but not attributed to the consumption of food.

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[21] *Canadian Food Inspection Agency Act*, S.C. 1997, c.6, s.23

[22] *Expert Advisory Panel Report, supra* note 1, p. 33.

[23] *Ibid.*, Ch. 4.

The CDC estimates that foodborne diseases cause approximately 76 million illnesses, 323,000 hospitalizations and 5,200 deaths in the U.S. each year.[26] On a per capita basis, this would translate into approximately 3.2 million illnesses in Ontario annually (assuming common incidence rates).[27]

In the United Kingdom (U.K.), the Food Standards Agency has reported that in 2000 there were over 65,000 reported cases of foodborne illness caused by five major pathogens.[28]

In Canada, there is less reliable data measuring the true extent of foodborne illness. Although Canada has established surveillance programs for enteric disease, the accuracy of the data is limited by the nature of the reporting mechanisms. Health Canada is currently undertaking further studies to provide a more accurate estimate of foodborne disease prevalence.[29] Health Canada estimates that over 30,000 cases of foodborne illnesses are reported in Canada, the majority of which are due to microbial contamination of raw foods of animal origin including meat, poultry, eggs, raw milk, cheese, fish and seafood.[30]

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[24] U.S., CDC, *Foodborne Illness – General Information*, available from http://www.cdc.gov/ncidod/dbmd/diseaseinfo/foodborneinfections_g.htm#mostcommon [accessed 2 June 2004].

[25] G. Campbell et al., OMAF, *Estimating the total health-related impact of foodborne illness in Ontario, using Monte Carlo simulation to characterize uncertainty* (4 November 2003).

[26] P. Mead et al., *Food-related Illness and Death in the United States*, Emerging Infectious Diseases (Vol. 5, No. 5, September – October 1999).

[27] Applied Research Consultants, OMAF, *Case Study Report: Economic Impacts of Proposed Ontario Food Safety System Initiatives* (4 March 2002).

[28] U.K., Food Standards Agency, *Measuring Foodborne Illness Levels* (18 April 2002), available from http://www.foodstandards.gov.uk/science/sciencetopics/microbiology/58736 [accessed 2 June 2004].

In Ontario, there have been a number of studies of enteric illness based on actual reporting. One study showed that between 1992 and 1996, 56,690 reported cases of enteric disease related to eight pathogens.[31] A more recent study reported that between 1997 and 2001, 44,451 cases of confirmed enteric disease were attributable to these eight pathogens. This data must be read carefully because enteric illness can also be due to many non-food related causes.[32] To date, there has been limited surveillance and study to determine the true extent of foodborne illness in Ontario beyond what is reported. One recent Ontario government report estimates that there are over 305,573 cases of foodborne illness in Ontario each year based on a review of 16 pathogens of which approximately 20% or 61,000 are related to the consumption of meat and poultry products. While many foodborne illnesses result in only short-term discomfort without any permanent consequences, it is important to note that foodborne illness can and does result in serious permanent physical injury and even death, particularly in vulnerable groups such as young children and the elderly.[33]

3.5.2 The Economic Costs of Foodborne Illness

In addition to the personal suffering of those who are afflicted with foodborne illness, there are significant economic costs. In the U.S., the cost of human illness due to seven specific pathogens has been estimated to be in the range of $6.5 billion to $34.9 billion U.S. annually. In Australia, the cost of an estimated 11,500 cases of food poisoning per day was calculated at $2.6 billion A.U.D. annually. In England and Wales, the medical costs and value attributed to lives lost from five specific foodborne infections were estimated at £300 - £700 million annually in 1996.[34]

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[29] Health Canada, National Studies on Acute Gastrointestinal Illness, *Background*, available from http://www.hc-sc.gc.ca/pphb-dgspsp/nsagi-enmga/info_e.html [accessed 29 April 2004].

[30] Health Canada, *Policy Development for Raw Foods of Animal Origin*, available from http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/rfao-aoca/e_rfao.html [accessed 7 June 2004].

[31] Health Canada, *Distribution of Foodborne Disease by Risk Setting – Ontario*, Canada Communicable Disease Report (Vol. 24-8, 15 April 1998), available from http://www.hc-sc.gc.ca/pphb-dgspsp/publicat/ccdr-rmtc/98pdf/cdr2408e.pdf [accessed 2 June 2004].

[32] J. Lim & D. Middleton, MOHLTC, *Enteric Outbreaks Reported in Ontario, 2000-2002*, Public Health and Epidemiology Report Ontario (Vol. 14, No. 11, 31 December 2003), p. 202.

[33] American Medical Association et al., *Diagnosis and Management of Foodborne Illnesses: A Primer for Physicians and Other Health Care Professionals* (February 2004), p. 3, available from http://www.ama-assn.org/ama1/pub/upload/mm/36/2004_food_introclin.pdf [accessed 9 June 2004].

In 2002, OMAF estimated the economic impact of annual foodborne illness cases in Ontario. OMAF's analysis concluded that there are in excess of 2.5 million cases of foodborne illness in Ontario each year, requiring 9,319 annual hospitalizations and resulting in 135 deaths.[35] Based on this estimate, OMAF projected the annual economic impact arising from lost time, doctors' visits, hospitalizations, death and chronic sequelae amounts to be in excess of $3.2 billion in Ontario. Health care is a responsibility of the provincial government and this amounts to a major financial burden which OMAF estimates to be approximately $786 million per year.[36]

OMAF estimates that 30% of these health-related costs, namely, $207 million is attributable to meat-related illness.[37] OMAF believes that their estimates are very conservative and that the true costs are probably higher.

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[34] FAO & WHO, *Assuring Food Safety and Quality*, supra note 3, p. 336; Codex Alimentarius Commission, *Recommended International Code of Practice – General Principles of Food Hygiene*, supra note 3; J. Buzby et al., USDA, *Bacterial Foodborne Disease: Medical Costs and Productivity Losses*, AER No. 741, (Washington: Economic Research Service, 1996); WHO, *World Health Statistics Quarterly*, Vol. 50, No. 1 & 2, (Geneva: WHO, 1997).

[35] G. Campbell, OMAF, *Estimated Annual Cases, Hospitalizations, and Mortality from Foodborne Diseases in Ontario and Resulting Economic Impact* (20 June 2002).

[36] *Ibid.*

[37] *Ibid.*

Estimated Annual Health-Related Costs, Cases and Deaths Resulting from Foodborne Illness in Ontario by Food Group Projected for the year 2002[38]

Food Group	Cost	Percent Impact	Est. cases	Est. deaths	Average no. cases per outbreak*
Horticultural products, incl. Non-deli salad	$146,812,323	18.7 %	86,853	7	41
Poultry	104,560,949	13.3 %	43,434	4	25
Beef	83,375,078	10.6 %	9,106	7	20
Deli salads	59,287,936	7.5 %	30,904	3	57
Ready to eat meats	57,732,165	7.4 %	19,105	4	32
Seafood	36,644,331	4.7 %	19,088	2	24
Egg/egg products	31,898,509	4.0 %	8,224	3	28
Dairy, excl. raw milk	27,983,415	3.6 %	13,145	2	54
Pork	13,182,801	1.7 %	5,354	1	51
Mixed/miscellaneous products	196,100,995	24.9 %	165,686	6	30
Other meats, non-RTE	12,012,312	1.5 %	5,245	1	27
Raw milk	16,860,654	2.1 %	4,195	1	10
Total	$ 786,451,469	100.00 %			

Pathogens considered: Campylobacter spp., Salmonella spp., VTEC, Listeria monocytogenes, Bacillus cereus, Clostridium perfringens

Economic considerations: Lost time, doctors' visits, hospitalizations, deaths, chronic sequelae

*An "outbreak" is an incident in which two or more persons, in separate households, experience similar illness after common exposure.

3.5.3 Causes of Foodborne Illness

Foodborne illness is caused as a result of the consumption of or contact with food that has been contaminated with some type of microbiological, biological, chemical or physical hazard. Examples of these contaminants are listed in the chart below.

Types of Contaminants

Hazard	Example
Microbiological	Bacteria, viruses, prions, yeasts, moulds, parasites
Biological	Bone, hair, insects, faeces
Chemical	Pesticides, toxins, cleaning liquids, veterinary drug residues
Physical	Glass, metal, wood, string, dirt, etc.

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[38] *Ibid.*

1.1.1 Meat as a Source of Microbiological and Biological Hazards

There are more than 250 different kinds of foodborne illnesses. Most foodborne illnesses are related to infections which are caused by a variety of bacteria, viruses and parasites. Meat can contain microbial agents that cause foodborne illness usually with initial symptoms of nausea, vomiting, abdominal cramps and diarrhea.

The most commonly recognized bacteria found in meat products are *Campylobacter*, *Salmonella*, and *E. coli* O157:H7. Other bacteria found in meat include *Bacillus cereus*, *Clostridium botulinum*, *Clostridium perfringes*, *Listeria monocytogenes*, *Shigella* spp, *Staphylococcus aureus* and *Vibrio vulnificus*.

Current knowledge suggests variant Creutzfeldt-Jacob Disease (vCJD) is a disease which can be transmitted to humans by consumption of beef containing abnormal proteins called prions. It is believed that prions which cause BSE in cattle are transmitted to the cattle through feed containing meat and bone meal manufactured from the rendering of BSE-infected cattle.[39] The current scientific evidence suggests that humans are at risk if they consume certain tissues from BSE infected cattle which are called specified risk materials (SRM). The SRM includes the skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle aged 30 months or older, and the distal ileum of cattle of all ages.[40] It is important to note that vCJD is a fatal disease without a current known cure. Only one case of vCJD has been detected in Canada so far, although it is suspected that this person contracted the illness in the United Kingdom.[41]

3.5.4 Meat as a Source of Chemical and Physical Hazards

Chemical and physical hazards associated with meat products can also cause illness in humans. The chemical hazards include anti-microbial drug residues, hormone residues, environmental pollutants and pesticides, and processing-related contaminants. Potential contaminants are also in various food additives used as preservatives to improve appearance and flavour in processing. Additives such as sodium nitrate are particularly relevant in the safety of cured meats. The preparation of ready-to-eat meats which are ready to be consumed by the consumer after purchase are particularly high risk for microbial contaminants as well as processing-related contaminants.

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[39] *Expert Advisory Panel Report*, *supra* note 1, p. 42.
[40] *Ibid.*
[41] G. Campbell, OMAF, *Estimated Annual Cases, Hospitalizations, and Mortality from Foodborne Diseases in Ontario and Resulting Economic Impact*, *supra* note 35.

Anti-microbial and anti-parasitic drug residues can contaminate meat where medications are administered to animals and there is a failure to observe the recommended drug withdrawal period prior to slaughter.[42]

Like many other raw materials, meat products are exposed to physical contamination. For example, there is a risk of contamination by a broken needle used to administer medication to an animal at the farm. During slaughter through to processing, meat is exposed to various other potential external physical contaminants. The failure to detect and remove such contaminants can result in illness and injury to humans.

3.5.5 How Meat Becomes Contaminated

Meat can become contaminated in many different ways.[43] Microbial agents capable of infecting people and causing illness can occur naturally in the environment or in animals. Some of these agents can cause animals to become ill, whereas others can be found in healthy animals. Diseases which can be transmitted from animals to humans are called zoonotic diseases. Approximately one-half of known infectious microbial agents can be transmitted from animals to humans.[44] Of concern are new emerging infectious diseases, many of which are zoonotic, involving newly identified pathogens such as West Nile Virus, Avian Influenza and SARS.

Humans are also sources of infection. Transmission of microbial agents to meat products can easily occur if the food is contaminated by an infected food handler or through faulty food handling or improper hygiene. Appendix F provides a helpful summary of the biological, chemical and physical hazards commonly associated with meat during the slaughter, processing, retail and food services stages and possible interventions.

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[42] *Expert Advisory Panel Report*, *supra* note 1, p. 49.

[43] Health Canada, The Steering Committee For Raw Foods Of Animal Origin, *Recommendations For The Development Of Policy Related To Raw Foods Of Animal Origin* (24 September 2001), available from http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/rfao-aoca/e_rfao_sept2101.html [accessed 2 June 2004].

[44] *Expert Advisory Panel Report*, *supra* note 1, p. 33.

3.5.6 Responsibility for Reduction of Foodborne Illness

Most foodborne illnesses from meat are related to pathogens and, as a result, often can be prevented with proper handling and processing and ultimately cooking the meat to a temperature that will kill the pathogens, but the onus should not be placed on the consumer alone. Effective food safety is a shared responsibility. A good food safety program by industry, an appropriate level of government inspection and enforcement throughout the farm to fork continuum, and responsible food preparation and handling by the consumer is the surest formula for reducing the risk of meat-related illness arising from the consumption of meat. Such a food safety system allows consumers to have confidence in the safety of the meat they consume.

3.6 Food Safety Programs and HACCP

Any discussion of a science-based food safety system must involve a discussion of the Hazard Analysis Critical Control Point system (HACCP). HACCP (pronounced Hassip) is widely recognized as the preferred method for assuring safety of our food including meat.[45]

HACCP has become synonymous with food safety.[46] HACCP was developed approximately 45 years ago by the Pillsbury Company as part of its work with the U.S. Army and NASA in producing food products for use in the space program that were without defect and safe for consumption by astronauts. HACCP has been universally endorsed by international bodies including CAC, FAO, WHO, as well as many other national and international organizations, leading food safety scientists, governments and industry.

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[45] M. Pierson, USDA, *An Overview of Hazard Analysis Critical Control Points (HACCP) and Its Application to Animal Production Food Safety*, Conference of Research Workers in Animal Diseases (12 November 1995), available from http://www.cvm.uiuc.edu/HACCP/Symposium/PIERSON.HTM [accessed 22 April 2004].

[46] FAO, *Food Quality and Safety Systems - A Training Manual on Food Hygiene and the Hazard Analysis and Critical Control Point (HACCP) System* (Rome: FAO, 1998), s. 3.

In 1993, HACCP was first recognized and adopted by CAC. The recommended International Code of Practice – General Principles of Food Hygiene adopted in June 1997 includes as its annex, the HACCP system and guidelines.[47] This is the standard against which all HACCP programs are measured.

HACCP is a science-based system that identifies specific hazards and measures for their control to ensure the safety of food. Two key elements of a HACCP system are that it is both preventative and systemic in approach. It is designed to address biological, chemical and physical hazards. The system is designed to detect potential hazards before they occur and to implement control measures to reduce or eliminate the likelihood of their occurrence. HACCP-based systems are important because, while meat inspection and testing is significant, there is no amount of inspection and/or testing that is capable of eliminating all hazards. We should not rely exclusively on government inspection and testing to ensure the safety of our meat. HACCP, together with a good inspection and testing system, form the core of any solid food safety system. Organoleptic inspection[48] is not enough. HACCP alone is not enough. Government organoleptic inspection and HACCP complement each other in a truly science-based approach to food safety.

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[47] Codex Alimentarius Commission, *Recommended International Code of Practice – General Principles of Food Hygiene*, *supra* note 3. See Appendix E.

[48] Organoleptic relates to the senses (taste, colour, odour, feel). Organoleptic inspection involves an inspector visually examining, feeling and smelling animal parts to detect signs of disease or contamination.

3.6.1 HACCP Principles

HACCP's science-based, preventative and systematic approach to the identification, evaluation and control of food safety hazards is based on the following seven key principles:

PRINCIPLE I:	Conduct a hazard analysis. A hazard is defined as a biological, chemical or physical agent in, or a condition of food with the potential to cause an adverse health effect.
PRINCIPLE II:	Determine the Critical Control Points (CCPs). A CCP is a step at which a control can be applied. It is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.
PRINCIPLE III:	Establish the critical limits.
PRINCIPLE IV:	Establish a system to monitor control of the CCP.
PRINCIPLE V:	Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.
PRINCIPLE VI:	Establish procedures for verification to confirm the system is working effectively.
PRINCIPLE VII:	Establish documentation concerning all procedures and records appropriate to these principles and their application.[49]

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[49] Codex Alimentarius Commission, *Recommended International Code of Practice – General Principles of Food Hygiene, supra* note 3.

These seven HACCP principles are applied in a 12-step logical sequence as follows:

Step 1	Assemble a HACCP Team
Step 2	Describe the Product
Step 3	Identify its Intended Use
Step 4	Construct a Flow Diagram
Step 5	Conduct On-Site Confirmation of Flow Diagram
Step 6/Principle 1	Conduct a Hazard Analysis
Step 7/Principle 2	Determine the Critical Control Points (CCPs)
Step 8/Principle 3	Establish the Critical Limits
Step 9/Principle 4	Establish a System to Monitor Control of the CCPs
Step 10/Principle 5	Establish the Corrective Actions to be taken when monitoring indicates that a particular CCP is not under control
Step 11/Principle 6	Establish procedures for verification to confirm that the HACCP System is working effectively
Step 12/Principle 7	Establish documentation concerning all procedures and records appropriate to these principles and their application[50]

3.6.2 Conditions Precedent to a HACCP-Based Food Safety System

The seven HACCP principles and the twelve-step application process are not applied in a vacuum. A HACCP system assumes that there is an underlying foundation of prerequisite programs. Prerequisite programs establish the basic environmental and operating conditions necessary for the production of safe, wholesome food. Prerequisite programs cover the following areas: good hygienic practices (GHP); good manufacturing practices (GMP);[51] shipping, receiving and storage; sanitation; equipment maintenance; pest control; recalls; and water safety. The scope and extent of these prerequisite programs may vary depending on the activity undertaken. They are usually part of any meat regulation system.

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[50] *Ibid.*

[51] GHP/GMP are sometimes also described in HACCP plans as Good Agricultural Practices (GAPs) or Good Production Practices (GPPs). Generally, they describe a combination of practices and policies that are intended to promote good hygiene and the production of safe food.

Prerequisite programs are distinct from the HACCP plan and they need to be documented and regularly audited. An important part of the implementation of a HACCP plan is to confirm the existence and effectiveness of all prerequisite programs.

The successful application of HACCP requires the full commitment and involvement of management and the total workforce.[52] Management must be educated as to the benefits of HACCP and why it must take a leadership role in implementing it. Management and all employees must be properly trained in the operation of the HACCP system and also in the importance of their role in the production of safe food. Specific training is required, particularly for each CCP with clear and understandable instructions and procedures outlining performance expectations.[53]

The use of HACCP systems requires both government and the user to adopt a different approach to food safety. The traditional regulation and inspection system is based on the "command and control" model where there are rules of expected performance and then, inspection and testing to determine if these standards have been met. HACCP, on the other hand, is an outcome-based system that focuses on identification and prevention. While governments continue to inspect and monitor compliance with the regulated food safety standards, there is also the need under HACCP for governments to verify process control and pathogen reduction based on pre-determined standards. An important aspect of any mandatory HACCP system is an inspectorate who are knowledgeable and well-trained in the principles of HACCP and HACCP verification procedures.

3.6.3 HACCP Verification and Recognition

Verification and recognition are two important components of a successful HACCP system. It is important to ensure that each operator's HACCP program, including prerequisite programs, is in compliance with all HACCP and regulatory requirements. Having made a significant investment in time and resources to develop a HACCP system, operators desire formal government recognition of their certified or verified HACCP program. Formal verification and recognition by the government are important food safety measures, but also allow the producers to market themselves as approved HACCP facilities.

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[52] *Expert Advisory Panel Report*, *supra* note 1, p. 11; USDA, National Advisory Committee on Microbiological Criteria for Foods, *Hazard Analysis and Critical Control Point Principles and Guidelines* (Adopted 14 August 1997), p. 6.

[53] *Ibid.*

This verification/recognition process can be done in a number of different ways including government certification, third party certification or a combination of the two. Various methods have been used in other jurisdictions, however, most governments will somehow audit and recognize individual establishments.[54]

Some jurisdictions have adopted a system of third party recognition.[55] If third party organizations are used for certification, they must be competent, impartial and have HACCP experience. Organizations such as the International Standards Organization (ISO), Standards Council of Canada (SCC) or Canadian General Standards Board (CGSB) are examples of organizations that undertake this type of activity. These third party organizations are involved in the audit and certification process, but also may have ongoing involvement such as conducting follow-up audits or review of documentation to verify the ongoing operation of the HACCP plan, or periodic re-certification.

Recognition and verification by government does not replace in any way the ongoing internal verification of the HACCP system by the operator. The operator must undertake a continual review of process control systems, including corrective and preventative actions to ensure that regulatory and/or specified requirements are met as part of the HACCP plan.

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[54] This includes FSEP, QMP and FSIS (US) and many European member states.

[55] OMAF, *Hazard Analysis Critical Control Points (HACCP), Background Paper, Draft 1* (2001), p. 45.

3.6.4 Benefits and Barriers to HACCP

Consumers, industry and government all benefit from HACCP systems.

The benefits to consumers include:

- reduced risk of foodborne disease;
- increased awareness of basic food hygiene;
- increased confidence in the food supply; and
- improved quality of life (health and socio-economic).

The benefits to industry include:

- increased ownership and responsibility for the safety of their product with less attention on traditional reliance on government standards and inspection measures;
- increased market access;
- reduction in production costs (reduced recall/waste, greater efficiency);
- improved product consistency and quality;
- increased consumer and/or government confidence;
- improved staff-management commitment to food safety;
- decreased business risk;
- reduced legal and insurance costs; and
- capacity to accommodate and react to scientific and technological developments including advances in equipment design and changes in processing procedures.[56]

The benefits to government include:

- improved public health and reduced public health costs;

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[56] FAO, *Food Quality and Safety Systems – A Training Manual on Food Hygiene and the Hazard Analysis and Critical Control Point (HACCP) System,* (Rome: FAO, 1998), s. 2; JRG Consulting Group, OMAF, *Potential Support Mechanisms for Successful Implementation of HACCP in Ontario* (May 2003); OMAF, *Hazard Analysis Critical Control Points (HACCP), Background Paper, Draft 1* (2001); WHO, *Strategies for Implementing HACCP in Small and/or Less Developed Businesses,* (Geneva: WHO, 1999).

- more efficient and targeted food safety control;
- increased public confidence in the food supply;
- more efficient and effective government oversight based on records and documentation that allow inspectors to verify ongoing compliance; and
- promotion of industry and trade.[57]

No system is perfect and a number of barriers to HACCP need to be considered and addressed. These include:

- significant costs associated with the development and implementation of the program including capital costs, training costs and consultant's fees;
- additional costs associated with training of management and staff;
- additional costs associated with initial and ongoing accreditation/verification;
- additional costs to develop and support HACCP plans; and
- additional costs to train inspectors and undertake a HACCP verification process.[58]

Much concern has been raised in respect of the barriers faced by smaller and medium sized enterprises (SMEs) in implementing HACCP. Because many of the producers, including farms, abattoirs, food processors and food retailers in Ontario fall within this category, special consideration needs to be given to identifying and addressing these barriers which include:

- lack of belief that HACCP is worthwhile or can make a difference;
- lack of customer demand for HACCP;
- limited financial resources;
- inadequate infrastructure and facilities;
- inadequate knowledge, training and expertise;
- lack of government commitment and support;

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[57] *Ibid.*
[58] *Ibid.*

- the perception that HACCP is too difficult and too expensive to implement;
- language and literacy barriers;
- lack of support and commitment from top management;
- increased red tape and documentation;
- complexities caused by multiple product lines; and
- lack of umbrella organizations to represent the food processors in certain areas. [59]

There are effective strategies and measures that can be put into place to reduce these barriers. I will outline these later in this chapter.

3.6.5 Economic Benefits of HACCP

As noted earlier, foodborne illness places a heavy burden on society in the form of personal suffering as well as economic costs. More and more research is demonstrating what common sense would predict, that HACCP safety programs do make a difference in reducing pathogen levels and other contaminants in our food resulting in a reduction of foodborne illness.

Recognizing that the implementation of a HACCP program involves a substantial investment by both the provincial government and industry, it is worthwhile to consider whether there are associated economic benefits to offset the investments. The adoption of mandatory HACCP in many jurisdictions has been based, in part, on an estimation of HACCP's benefits and costs.

A number of studies have attempted to measure the economic benefits and costs of a HACCP program.[60] It is, however, difficult to accurately measure these benefits and costs, especially prior to implementation. One study in the U.K. concluded that there was increased access to overseas markets, customers were retained and new customers secured, the staff were more motivated, microbial counts were lowered and there was reduced waste. HACCP plans were demonstrated to increase business opportunities at the same time as reducing costs with increased labour productivity and less waste.[61]

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[59] WHO, *Strategies for Implementing HACCP in Small and/or Less Developed Businesses*, *supra* note 56; JRG Consulting Group, OMAF, *Potential Support Mechanisms for Successful Implementation of HACCP in Ontario* (May 2003), p. 11.

[60] S. Henson et al., *Costs and benefits of implementing HACCP in the U.K. dairy processing sector*, Food Control (Vol. 10, Issue 2, April 1999), p. 99-106

In Ontario, the economic impact of HACCP programs has not been formally estimated. Any such estimate would have to compare the costs to implement HACCP with the corresponding cost savings. The implementation costs would include the costs incurred by industry in implementing HACCP programs and also the costs to government in developing the program, providing the support measures to industry to implement HACCP and the costs of verification, recognition and ongoing auditing. On the other hand, there are potentially significant cost savings associated with implementation of HACCP programs. Once implemented and functioning, industry should see reductions in costs, improved efficiencies and less product recall, lower insurance and other risk management costs.

The greatest economic benefit relates to the reduction of foodborne illness attributable to HACCP programs. Research conducted in other jurisdictions has shown that HACCP programs do result in significant economic benefits in the form of reducing health care costs and increased productivity due to a reduction in absence due to food-related illness.[62]

A recent study was conducted on behalf of OMAF to estimate the economic impact of proposed Ontario food safety initiatives designed with the goal to reduce foodborne illness by 30% over a five-year period.[63] The study concluded that (from 6 pathogens studied) a reduction in foodborne illness by 30% over 5 years would result in:

- between 19,300 and 27,600 fewer cases of foodborne illness per year;

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[61] L. Unnevehr & T. Roberts, *Improving Cost/Benefit Analysis for HACCP and Microbial Food Safety: An Economist's Overview*, (University of Massachusetts, 1997); E. Golan et al., USDA, *Tracing the Costs and Benefits of Improvements in Food Safety: The Case of the Hazard Analysis and Critical Control Point Program for Meat and Poultry* (AER-791, October 2000).
[62] ARC Applied Research Consultants, OMAF, *Case Study Report: Economic Impacts of Proposed Ontario Food Safety System* (4 March 2002).
[63] OMAF, Science and Advisory Unit, *Hazard Analysis Critical Control Points (HACCP) Background Paper – Draft 1* (2001).

- between 1,600 and 2,200 fewer doctors' visits;
- between 160 and 230 fewer hospitalizations;
- between 6 and 8 fewer deaths per year;
- between 8 and 10 fewer chronic care cases; and
- between 31,800 and 45,400 fewer workdays lost due to illness.

The report projected that the present value of the health benefits saved over a 15-year period would be $855.5 million. The likely health cost savings would be greater if additional pathogens were included in the analysis. The report estimated that the cost of the government initiatives to achieve the reduction of foodborne illness by 30% over the same 15-year period would amount to a present value of $170.7 million. While the study is only an estimate and does not attempt to estimate the costs to industry, a reasonable inference can safely be drawn that any food safety initiative, including HACCP, that can decrease the amount of foodborne illness in Ontario by 30% would have a significant net economic impact on Ontario. Because these cost savings are in health care, which is a significant government expenditure, a reasonable investment by the provincial government in a program that reduces foodborne illness will likely result in a net positive economic impact for Ontario, in addition to the tangible benefits of improved health for its citizens.

3.7 Implementation of HACCP-Based Food Safety Programs

The provincial government has for some time recognized that there is a need to update Ontario's food safety system and, in particular, to update its standards and requirements to keep pace with developments in science, technology, international and national standards, consumer behaviour, and industry practices.[64] HACCP has been front and centre in its plans for reform.

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[64] *Ibid.*, p.4

OMAF's Science and Advisory Unit summarized the need for HACCP in this way:

> *HACCP is now firmly established worldwide as the foremost means of assuring food safety throughout the food chain. In the future HACCP will be an essential vehicle in consideration of the equivalence of food safety control systems for nationally/internationally-traded food. In order for Ontario's food manufacturers to continue to provide the province with safe food products while remaining competitive, it has been recognized by OMAFRA (OMAF) that there is a need to update current standards and requirements in the processing environment.*
>
> *The existing food safety system is based on traditional inspection. However, it is not possible to inspect safety and quality into food products and end product testing is usually destructive and gives assurances of only a small amount of the product produced. Traditional end product testing also requires the delay of distribution and does not fit with the demand for "fresh" product.*
>
> *Within Ontario there is urgency in the need to move towards HACCP. Without HACCP, the province's food industry will suffer a loss of existing markets as well as a loss of access to new markets. Also, without HACCP there is increasing disparity with the federal food safety system, as well as international food safety systems.*[65]

There has been considerable discussion and debate including consultation with stakeholders with a view to identifying the best HACCP strategy for Ontario and deciding whether it should be made mandatory. To date, there has been a lack of will and/or resources to implement a mandatory program.

Before reviewing the current use of HACCP in Ontario, it is helpful to outline the development of HACCP in other jurisdictions.

3.7.1 European Union and United Kingdom

The European Union (EU), in spite of its unique structure and jurisdiction, has developed a systematic approach to HACCP for its member states.

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[65] *Ibid.*, p.4.

The European Commission's (EC) approach to HACCP has been to develop a series of directives to be incorporated into the legal systems of the member states. In 1993, the EC adopted a general food hygiene directive based on some HACCP principles which came into effect in 1995.[66] It covers all stages beyond primary production, but does not include farms or abattoirs.

After a serious outbreak of *E. coli* 0157:H7 in central Scotland in 1996 the Scottish government commissioned an expert report to investigate the cause and make recommendations to improve food safety.[67]

This expert group, known as the Pennington Group, carefully considered the benefits of a HACCP system. They appropriately described HACCP as both a philosophy and a practical approach to food safety.[68] The Pennington Group's recommendations included that mandatory HACCP be implemented throughout the continuum from slaughterhouse to butcher shops. In making these recommendations, the Pennington Group stated:

> *We endorse whole-heartedly the implementation of HACCP. We believe there is a particular need to raise the level of awareness of, and expertise in tackling the hazards involved in food handling and production. The most effective way of minimizing risk must be to influence the attitudes of all those involved throughout the food production process and to ensure that they take appropriate personal responsibility for the adoption of good practice in food handling and hygiene. We have had reports of its impressive effect in other countries. We, therefore, accept entirely that HACCP should underpin the approach to food safety at all stages of the food chain.*[69]

In the U.K., regulations were enacted in 2002 requiring meat plant operators to introduce hygiene procedures based on HACCP principles and to undertake microbiological testing in red meat plants. These regulations apply to all abattoirs and meat processors. Operators of small and medium-sized plants were given a phase-in period prior to mandatory compliance.[70]

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[66] EU, *Council Directive 93/43/EEC on the hygiene of foodstuffs*, [1993] O.J.L. 175/1.

[67] The Pennington Group, *Report on the circumstances leading to the 1996 outbreak of infection with E. coli O157 in Central Scotland, the implications for food safety and the lessons to be learned* (Scottish Office, 1998), available from http://www.scotland.gov.uk/deleted//library/documents.w4/pgr-00.htm [accessed 4 June 2004].

[68] *Ibid.*, Ch. 4, s. 4.2.

[69] *Ibid.*, Ch. 4, s. 4.7.

3.8 United States

The U.S. has also been active in implementing HACCP in its food safety programs. In the U.S., food products are regulated by two agencies. The Food and Drug Administration (FDA) oversees all domestic and imported food except meat and poultry which are regulated by the FSIS of the USDA.

The FDA mandated the implementation of HACCP for seafood plants in 1996 and for fruit and vegetables in 2001. With respect to meat and poultry, FSIS released its Final Rule on Pathogen Reduction and HACCP systems (Final Rule) on July 25, 1996.[71] In all cases, mandatory HACCP requirements were phased in to allow industry a reasonable opportunity to implement the programs.

The HACCP models used by both FDA and USDA have common program elements, including the necessity of good manufacturing practices/sanitation operating procedures (GMPs/SOPs) as prerequisites together with a food safety program based on general HACCP principles. In addition, the programs require industry development of verification methods, implementation and maintenance of effective HACCP systems, and performance standards. The programs also have internal and external programs for education, training and sponsorship of research to evaluate HACCP and to develop program improvements.[72] The performance standards set out in the Final Rule are drafted in such a way as to prescribe the expected levels of performance, while affording establishments considerable flexibility in determining how to achieve those standards. The guidebooks developed by FSIS for their HACCP plan follow the Codex principles, but allow each facility to develop its HACCP program as it sees fit. This approach requires greater involvement on the part of government inspectors and auditors who are required to examine each plant on an individual basis to determine if the HACCP plan is in compliance with the regulation.

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[70] U.K., Food Standards Agency, *HACCP in Meat Plants*, available from http://www.food.gov.uk/foodindustry/meat/haccpmeatplants/ [accessed 4 June 2004]; *The Meat (Hazard Analysis Critical Control Point) Regulations 2002*, S.I. 2002/889.

[71] USDA, FSIS, *Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems; Final Rule*, 61 Fed. Reg. 144 (1996).

[72] J. Kvenberg et al., *HACCP development and regulatory assessment in the United States of America*, Food Control, 11:387-401 (2000).

FSIS conducted microbiological studies of meat and poultry establishments prior to the implementation of the Final Rule in order to set clear microbial performance standards. This allows FSIS the ability to evaluate the effectiveness of the mandatory HACCP regulation. The results to date have provided strong evidence that mandatory HACCP-based programs in the U.S. have resulted in a reduction of pathogen contamination in meat and poultry.[73] In May 2002, the CDC reported a 21% decrease in all foodborne illnesses in the U.S.[74] These results were attributed to a successful USDA strategy to reduce foodborne illness, the foundation of which was HACCP.

The CDC, through its emerging Infections Program Foodborne Diseases Active Surveillance Network (FoodNet), has been collecting data since 1996 on diseases caused by enteric pathogens transmitted through food. On April 30, 2004, the CDC reported on preliminary surveillance data for 2003, which showed substantial declines in the incidence of infections caused by five major pathogens. In particular, the data showed a one year 36% drop in *E. coli* 0157:H7 infections from 2002 to 2003 and a 42% drop overall since 1996. It is reported that efforts by the meat industry to reduce *E. coli* 0157:H7 in beef products are the major contributing factor to this downward trend. The CDC also reported that *Campylobacter* illnesses have dropped 28% and *Salmonella* illnesses dropped 49% since 1996. Foodborne illnesses caused by *Listeria monocytogenes* also showed significant decrease. The report specifically credits the control measures implemented by government agencies and the food industry, including enhanced food-safety education efforts and mandatory HACCP systems in meat slaughter and processing plants, as the primary reasons for the significant decreases.[75]

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[73] Meat Industry Internet News Service, *HACCP Program Has Cut Salmonella Risk* (23 March 2000), available from http://www.spcnetwork.com/mii/2000/000368.htm [accessed 4 June 2004].

[74] USDA, *Performance and Accountability Report for FY 2003, supra* note 18, p. 55.

[75] USDA, News Release, *Statement Regarding CDC Foodborne Illness Data Dr. Elsa Murano, USDA Undersecretary For Food Safety, Washington, D.C.* (29 April 2004); U.S., CDC, *Morbidity and Mortality Weekly Reports* (Vol. 53, No. 16, 30 April 2004).

3.8.1 Australia and New Zealand

Both Australia and New Zealand, through their food regulatory bodies, have been reviewing their meat inspection and food safety systems. To date, they have not enacted mandatory HACCP-based programs, but it appears that they are moving in this direction. The HACCP-based programs have been developed on a voluntary basis usually in order to comply with international standards for trade purposes.[76]

3.8.2 Other Canadian Provinces

No other province has yet enacted mandatory HACCP at all stages. A number of provinces are, however, updating their food safety laws and are moving towards mandatory implementation of food safety systems based on HACCP including the National Meat and Poultry Regulations and Code (NMPRC). There is growing recognition by the provinces that HACCP must become part of their provincial food safety system.

3.9 HACCP in the Canadian Federal System

In 1991, the CFIA in conjunction with the food industry implemented the Food Safety Enhancement Program (FSEP). FSEP was initially a voluntary program designed to encourage and support the development, implementation and maintenance of HACCP systems in federally registered establishments involving meat, dairy, honey, maple syrup, processed fruit and vegetables, eggs and poultry hatcheries. By September 2004, FSEP will be mandatory in all federally registered meat and poultry establishments.

In announcing its intention to make FSEP mandatory, the CFIA gave four reasons for doing so:

- HACCP is science-based, and if properly designed and implemented, significantly reduces the risk of biological, physical or chemical hazards reaching the consumer. HACCP ensures that all aspects of an operation are analyzed on a continuous basis allowing for improvement and plant efficiencies and resulting in less product waste and fewer product recalls;

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[76] OMAF, Science and Advisory Unit, *Hazard Analysis Critical Control Points (HACCP) Background Paper – Draft 1* (2001).

- HACCP systems are recognized under Codex as an internationally accepted standard for food safety and are already mandatory in many other countries;
- by setting out clear rules and responsibilities for industry and government in meat inspection activities, HACCP encourages shared responsibility for food safety leading to greater efficiency and effectiveness in the inspection process. Inspectors are able to focus more on critical food safety areas in the production process while trained industry employees assume more responsibility for detecting and removing food safety hazards; and
- mandatory FSEP provides the CFIA with the opportunity to adapt its meat inspection program to make it more effective. Inspection staff is given a broader scope for compliance and enforcement activities, focusing on the verification of the effectiveness of HACCP systems implemented by meat establishments and ensuring conformance with all applicable regulations and policies in them.[77]

The FSEP program contains both prerequisite programs and the HACCP plan. The prerequisite programs include specific rules regarding premises, transportation and storage, equipment, personnel, sanitation and pest control and recalls. The HACCP plan involves the twelve step/seven principles endorsed by the CAC.[78]

A very important part of the FSEP program involves various tools and aids, including implementation manuals,[79] a reference database for hazard identification, and other helpful resources to make the program understandable and easy to implement.

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[77] CFIA, *The Food Safety Enhancement Program (FSEP): Mandatory FSEP for Federally Registered Meat and Poultry Establishments*, available from http://www.inspection.gc.ca/english/fssa/polstrat/haccp/overvuee.shtml [accessed 4 June 2004].

[78] *Ibid.*, p. 3; OMAF, Science and Advisory Unit, *Hazard Analysis Critical Control Points (HACCP) Background Paper – Draft 1* (2001), p. 33.

[79] CFIA, *FSEP Implementation Manual*, available from http://www.inspection.gc.ca/english/fssa/polstrat/haccp/manu/manue.shtml [accessed 3 May 2004].

The FSEP materials also include generic models covering many different processes and products that can be used as a starting point or a template for developing a customized HACCP plan.[80] There are at least 17 available generic models available for meat and poultry products from slaughter to various forms of processing.[81] These materials and tools are readily available and reasonably priced.

The underlying philosophy of the FSEP plan is the partnership between the food industry and the government. Each food-processing establishment develops the HACCP system tailored to its own products and operations. The HACCP system must meet all current program requirements (regulations) and the six prerequisite programs. Each establishment must develop a HACCP plan which includes details on the CCPs and establishes that adequate control measures are in place for any potential hazards to be identified. The plant personnel are responsible for monitoring and verifying each control point, keeping accurate records, and taking appropriate corrective actions when potentially hazardous situations are noted.

Like most HACCP plans, the primary responsibility for ensuring that the HACCP plan is working properly is on management. The CFIA will verify the company's HACCP plan and no plant can be CFIA-recognized until the system has been fully evaluated using the requirements of the FSEP program. CFIA inspectors, in addition to their regular inspection function, will periodically audit the establishment's records and procedures, assessing specific control measures and corrective measures taken and observing the processing at CCP's. If the HACCP system is found to be non-compliant or ineffective, the inspector will identify a non-conformance and the plant will be required to take corrective action. Failure to comply would result in compliance or enforcement actions taken by the CFIA.

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[80] For example, FSEP has generic models for meat and poultry products including beef, slaughter, boneless beef, cooked sausage, dried meat, ready-to-eat poultry products, ready-to-cook poultry products, poultry slaughter, hog slaughter.

[81] CFIA, *Food Safety Enhancement Program HACCP Generic Models*, available from http://www.inspection.gc.ca/english/fssa/polstrat/haccp/modele.shtml [accessed 4 June 2004].

3.10 HACCP-Based Food Safety Programs in Ontario Abattoirs and Meat Processing Plants

There are currently no mandatory HACCP food safety programs in Ontario. Some provincially inspected meat plants have implemented HACCP on a voluntary basis often in conjunction with industry-developed programs. Some provincial plants have implemented HACCP due to market forces. Many customers, such as national grocery chains, require that all meat and poultry products come from a plant with a HACCP program.

OMAF has recognized the importance of HACCP-based systems and acknowledged that HACCP systems in meat production establishments enhance food safety, improve quality, decrease business liability and contribute to maintaining market share in a very competitive environment.[62] OMAF has undertaken considerable study and stakeholder consultation in respect of HACCP and has three HACCP advisors on staff.

The stakeholder consultation process has shown significant support for science-based food safety standards including HACCP, microbial performance standards and food handler training, as long as there is appropriate government oversight and recognition.[63] Some licensed operators have raised concerns regarding costs of implementation, level of record keeping and the capacity of the provincial government to provide appropriate assistance. Most stakeholders recognize a need for a HACCP program, but want a role in developing and implementing the program.

In response, OMAF in consultation with industry and appropriate food safety experts, developed a voluntary HACCP program for food manufacturers in Ontario called HACCP Advantage. This program was unveiled for voluntary implementation on March 8, 2004. The HACCP Advantage Program consists of 57 prerequisite program standards and eight HACCP plan forms.[64] The prerequisite programs designed to control environmental and personnel-related hazards are divided into four groups: Control Programs, Training, Operational Controls and Environmental Controls. Each of these four categories is divided into sub-groups containing individual standards of performance. The HACCP plan development has 12 steps. The first five are preliminary steps that must be addressed prior to applying the seven HACCP principles. The completion of the forms will generate CCPs where key hazards are identified together with controls that are needed to eliminate, prevent or reduce the hazard to an acceptable level.

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[62] OMAF, Science and Advisory Unit, *Hazard Analysis Critical Control Points (HACCP) Background Paper – Draft 1* (2001), p. 5 & 6.

[63] OMAF, *Report on Consultations for the Provincially Regulated Meat and Poultry Industry* (September 2001).

[64] M. Elliott et al., OMAF, *The HAACP Advantage: Program Manual*, (Toronto: Queen's Printer for Ontario, 2003).

The HACCP Advantage Program appears to be a relatively straightforward, user-friendly program supported by an easy to use manual with some additional tools and resources readily available. While it is too early to assess the success of the HACCP Advantage Program, my impression of the overall program is favourable. Initial feedback from industry has also been positive. The strength of the HACCP Advantage Program is that it maintains the integrity and requirements of a true HACCP system as outlined by CAC and, at the same time, is practical and feasible for all facilities regardless of size, the commodity produced or volume processed. Additional materials, including a guidebook, are under development. There are no specific generic model or hazard identification databases developed to date and there have not been any specific guidelines or strategies developed for SMEs.

Recognition and verification are important elements of any HACCP program. These elements of the HACCP Advantage Program have not yet been fully unveiled. The current plan is that the recognition would be delivered by the CGSB. The operator would design and implement its HACCP system and then apply directly to the CGSB for recognition. The CGSB would then schedule and conduct a HACCP audit. The results of the audit would be provided to the facility with a certificate of recognition from CGSB and OMAF. Certified establishments will be listed on OMAF's website. It is expected that certification will be done on a three-year cycle requiring a full re-certification audit every three years and partial audits in between. Audits will consist of documentation review and on-site visits.

3.11 Will HACCP Work in Ontario?

As mentioned earlier, results from studies done to date in the U.S. and U.K. demonstrate that HACCP does improve food safety because it reduces the level of contamination of the meat. At the federal level, the CFIA has not yet measured the effectiveness of FSEP and is conducting baseline studies in order to do so.

In order to test the HACCP Advantage Program, OMAF supported a Proof of Concept project involving a medium-sized provincially licensed poultry slaughter facility. The purpose of the project was to apply HACCP in a SME, to demonstrate and test its economic feasibility and effectiveness in achieving food safety outcomes.

The Proof of Concept project began in the summer of 2003 and is expected to be completed in the fall of 2004. OMAF advises that preliminary results from the project demonstrate that the HACCP Advantage Program has had a very positive impact on reducing pathogen contamination. Those results show that with the implementation of HACCP, the prevalence of *Salmonella* on chicken carcasses was reduced by 61% and the prevalence of *Campylobacter jejuni/coli* was reduced by 71%. *Salmonella* and *Campylobacter jejuni/coli* counts dropped by 78% and 94% respectively. These results are impressive because the particular plant being tested was already a highly rated plant by OMAF even before HACCP was implemented.

Earlier in this report, I reviewed in detail the importance and benefits of a mandatory HACCP-based food safety program. The HACCP Advantage Program is a good program, although there is additional work to be done to complete its development. While there has been significant interest expressed by operators, it remains to be seen how widely it will be adopted voluntarily.

At this time, OMAF has no specific plan to make the HACCP Advantage Program mandatory. If HACCP is to be mandatory in Ontario, it is my view that the HACCP Advantage Program is an appropriate model to be used at abattoirs and food processors. HACCP Advantage remains a work in progress and further development is required to develop more process specific generic models and implementation tools. A plan to reduce barriers for SMEs and a developed recognition and verification program are also required.

Earlier in this report, I recommended that in conjunction with the proclamation of the *FSQA*, the Province of Ontario adopt meat and poultry regulations that are equivalent to the NMPRC. The adoption of NMPRC will require a mandatory HACCP-based food safety program including written sanitation, pest controls and maintenance programs, HACCP plan and microbiological performance standards.

3.12 Should HACCP be Voluntary or Mandatory?

HACCP originally developed as a voluntary program. Many larger companies and industry associations implemented HACCP to respond to international trade and market demands. There is a very clear trend toward mandatory HACCP food safety programs in all meat plants. HACCP is now mandatory in meat plants in the U.S., U.K. and in federally inspected plants in Canada.

OMAF consulted with operators of provincial meat plants in developing its HACCP program. The feedback from them has consistently been that HACCP should be voluntary and not mandatory. In my own discussions with operators of provincial plants, I heard a similar message from some operators. However, a significant number of operators also felt that HACCP food safety programs were important and should be made mandatory, albeit with appropriate assistance from the provincial government. This assistance should include support to develop and implement the plans, to provide training and financial assistance for costs of implementation and capital improvement costs. Concerns have been expressed to me that a mandatory HACCP program may cause a number of the small operators to suffer financial distress and perhaps go out of business. This could lead to a shortage of abattoir services in some areas or for some segments of the market currently serviced by these small operators.

Supporters of mandatory HACCP argue that in order to restore consumer and business confidence in provincially inspected meat, a mandatory

HACCP program is necessary. Opponents of mandatory HACCP argue that HACCP should be voluntary rather than mandatory to alleviate economic burdens, especially on small businesses. They suggest that market forces and advancing technology will cause HACCP programs to be implemented on a voluntary basis.

In the U.S., these opposing viewpoints were debated extensively. In the end, FSIS determined that mandatory HACCP was "the only viable option"[85] and concluded that HACCP was the optimal framework for targeting and reducing the many potential, but largely preventable, hazards associated with meat and poultry products and the risks of related foodborne illness would be minimized to the greatest extent possible only if the HACCP systems were implemented in every establishment.[86]

I am very sensitive to the concerns raised by small plant operators. I do, however, believe that there are ways to overcome these concerns, and that mandatory HACCP can be implemented in all plants irrespective of size, in such a way that would allow those operators to remain financially viable. I believe that once properly implemented, HACCP food safety programs will help to create an industry that will thrive and will produce meat that is safer. This will help restore consumer and business confidence in the meat and poultry industry which may have been lost. It is important to remember that it takes only one incident of unsafe meat entering the system to damage public confidence and to cause serious damage to the industry as a whole. Such an incident can occur in a large or small plant with similar devastating impact on the whole industry. The general public will not make a distinction between a plant with or without a HACCP system. Accepting, as I do, that HACCP will make meat safer, there is no good reason not to hold all provincial plants to the same standards provided that appropriate supporting measures and assistance are provided to address the concerns of SMEs.

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[85] USDA, FSIS, *Pathogen Reduction; Hazard Analysis and Critical Control Point (HACCP) Systems; Final Rule, supra* note 69, p. 38820.

[86] *Ibid.*, p. 38821.

3.13 HACCP in Small and Medium Sized Enterprises

SMEs have considerable concerns that they will face undue hardship if they are required to implement a mandatory HACCP program. I believe it is important to address these legitimate concerns and to recommend steps that should be taken by the provincial government to minimize any hardship.

The seven HACCP principles can be applied to any type of operation regardless of size. It has been suggested that the principles of HACCP should be scaled down for implementation in smaller facilities, but there is an equally legitimate concern that this could compromise food safety.[87]

Mandatory HACCP programs in small facilities have been successfully implemented in various jurisdictions. FSIS has reported that mandatory HACCP programs have been successfully implemented in approximately 6,500 national and state-inspected meat and poultry facilities in the U.S., a large portion of which were SMEs.[88] The major strategies included a phase-in of the mandatory program to accommodate smaller producers and to make appropriate training and support tools readily available.

FSIS put a number of support structures in place specifically for smaller plants including:

- appointed a National HACCP Small Plant Coordinator to coordinate a Small Plant Outreach Program;
- established a network of contacts and coordinators throughout the country who disseminate information on HACCP and provide technical guidance to small plants;
- asked large plants to act as sponsors for small plants to provide technical assistance, guidance and industry-oriented advice;
- held a series of implementation meetings around the U.S. to prepare for implementation in small plants;
- provided language assistance;

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[87] *Ibid.*, p. 38819-38820; T. Mayes & S. Mortimore, *Making the most of HACCP*, (Cambridge: Woodhead Publishing Limited, 2001).

[88] U.S. Food and Drug Administration, *Hazard Analysis and Critical Control Point (HAACP); Procedures for the Safe and Sanitary Processing and Importing of Juice; Final Rule*, 66 Fed. Reg. 13 (2001).

- developed generic HACCP models for a variety of processes;
- established a HACCP hotline to field questions from industry; and
- sent a series of letters to small plants to remind them of key preparation tasks and provide advice on when these should be accomplished so that implementation deadlines could be met.[89]

Similarly, in the U.K., a special program was designed to provide assistance for SMEs[90] in the implementation of their mandatory HACCP program.

In the development of a HACCP model for Ontario, OMAF identified several requirements that are critical for the successful implementation of HACCP in SMEs including:

- a strong requirement for a sound GMP program to control all general hazards and thus allow for control of many specific hazards in the HACCP plan;
- HACCP must be implemented by a properly trained person or group who possesses the knowledge, understanding and expertise in identifying hazards and assessing risks as well as the technical expertise in food microbiology and food chemistry;
- a trained, competent workforce that can develop, operate and maintain the newly implemented HACCP system; and
- full commitment from management and the workforce with an overriding internal belief in the HACCP approach and what it can accomplish.[91]

OMAF commissioned a consultant to review the potential support mechanisms for successful implementation of HACCP in Ontario in 2003.[92] The consultant identified 28 potential support measures, but in the end recommended 15 support measures for consideration as part of Ontario's overall HACCP approach. The recommended measures were as follows:

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[89] U.S., FSIS, *HACCP Implementation – Phase III for Very Small Plants* (1999), available from http://www.fsis.usda.gov/OA/background/phase3.htm [accessed June 6, 2004]; Meat Industry Internet News Service, *HACCP Program Has Cut Salmonella Risk*, *supra* note 73.

[90] T. Mayes & S. Mortimore, *Making the most of HACCP*, *supra* note 87.

[91] M. Brown, *HACCP in the Meat Industry*, (Cambridge: Woodhead Publishing Limited, 2000); S. Mortimore, *How to Make HACCP Really Work in Practice*, Food Control (Vol. 12, Issue 4, June 2001), p. 209-215.

[92] JRG Consulting Group, OMAF, *Potential Support Mechanisms for Successful Implementation of HACCP in Ontario* (May 2003).

- provide low cost training to operators (at, or close to, the work site);
- provide sector specific guide and workbooks to implementing HACCP (at minimal cost);
- provide Ontario food processors access to an OMAF supported HACCP website;
- provide on-site assistance and extension services (at minimal cost);
- provide materials to assist with prerequisite compliance;
- provide information on CCPs common to industry sectors;
- provide generic HACCP models for each sector;
- provide information on SOPsfor each sector;
- provide access to sector specific hazard databases;
- provide sector specific templates for record keeping;
- provide awareness-building activities;
- provide pre-HACCP business case analysis;
- provide a third party advisory panel for SMEs;
- provide on-going assistance to operators through field staff/extension agents; and
- provide tax incentives for food safety and HACCP training.

The consultant's report provides a detailed analysis of the options and how they could be implemented.

Many strategies have been developed for the implementation of HACCP in SMEs which have been successful in other jurisdictions. Much can be learned from those experiences. A WHO consultation group prepared a detailed and helpful report outlining strategies for implementing HACCP in small and/or less developed businesses which, in my view, sets out a helpful blueprint and foundation for the province to use as specific strategies are developed.[93] Additional strategies recommended by the WHO consultation group include:

- engaging industry and trade associations to promote HACCP in SMEs and to support them in the implementation of the HACCP system;
- prioritizing the industry sectors for which the implementation of HACCP is more important and phase-in mandatory HACCP based on these priorities and focus implementation on a sector-by-sector basis;
- establishing HACCP implementation committees in collaboration with all interested parties including consumers, industry representatives and trade associations;
- funding initiatives to accelerate the implementation of HACCP in high-risk sectors;
- bulk purchasing of equipment or services by industries/trade associations or government to support HACCP implementation and minimize the cost of implementation by individual businesses;
- providing relevant and technical training with consideration to the level of education, culture and language of SME managers and staff;
- facilitating availability of appropriate, current scientific support and low cost laboratory services;
- communicating to industry with respect to the need for change and the benefits of HACCP; and
- measuring the cost benefits of the HACCP program once implemented to demonstrate the effectiveness of HACCP and the success of the program.[94]

A mandatory HACCP program for Ontario should contain as many of the measures set out herein as practicable to ensure that the HACCP program is successfully implemented in all plants in such a manner as to minimize the financial burden to SMEs and to ensure that the programs operate effectively.

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[93] WHO, *Strategies for Implementing HACCP in Small and/or Less Developed Businesses*, *supra* note 56.
[94] *Ibid.*, p. 6-11.

3.14 Summary and Conclusions re HACCP

The Expert Advisory Panel recommends that a mandatory HACCP-based food safety system should be implemented continuously from production through to the retail and food service sector.[95] They recommend that an overall framework should be built for the whole food continuum concurrent with the development of the producer and processor programs. The basic framework should be continuous, transparent, user-friendly and easily understood by all. In making this recommendation, the Expert Advisory Panel states:

> *HACCP-based food safety has been accepted globally as the "gold standard" for food safety programs. In Canada, it is being applied across the food continuum, from the farm through to the consumer, although not with equal degrees of maturity in all sectors. Therefore it seems logical to apply its principles at provincial and local levels. Emphasis to start should be placed at the primary production and processing levels. The raw material for the processor comes from the farm and is an essential ingredient for building a strong HACCP-based food safety program at the slaughter plant. Healthy, clean, well nourished, stress-free animals produce higher quality and safe food products. It is easier to keep safe an already safe product and possibly improve food safety throughout the continuum than it is to build food safety into the product. This is particularly true with fresh, perishable products.*[96]

I agree with this statement and adopt it.

The Expert Advisory Panel has recommended a phase-in period of three to five years depending on the grace period during the initial implementation, which might last up to two years. I agree that this is a reasonable period of time. When FSIS implemented mandatory HACCP in 1996, it required all large plants (greater than 500 employees) to comply by January 1998, smaller plants by January 1999 and very small plants (less than ten employees) by January 2000. Most other jurisdictions who have implemented mandatory HACCP have done so with a reasonable phase-in period. In my opinion, Ontario should adopt a similar approach.

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[95] *Expert Advisory Panel Report, supra* note 1, p. 140.
[96] *Ibid.*, p. 139.

I recommend that the provincial government promulgate regulations to require mandatory HACCP-based food safety programs across all sectors of the food continuum including farms, abattoirs, transportation, free standing meat processors and food premises.[97] This food safety program should adhere to or surpass internationally recognized food safety guidelines and principles including the Codex. This food safety program should include distinct programs for all sectors of the food continuum keeping in mind the particular characteristics and risks associated with each sector. The programs should include an appropriate verification and recognition process.

I recommend that the provincial government provide appropriate resources to support the development and implementation of mandatory HACCP-based food safety programs and to ensure there is appropriate training of inspectors, auditors, operators and employees involved in these programs. I also recommend that the provincial government develop appropriate written materials and tools, guidelines, and generic models for industry and make them readily available at a reasonable cost.

I recommend that the provincial government develop a strategy to provide support and assistance to small and medium-sized enterprises in the implementation of mandatory HACCP programs. This support and assistance should include the measures that I have referred to in my Report. It must be recognized by the provincial government that SMEs will require added support to minimize the financial burden associated with HACCP implementation. **I recommend that the provincial government provide small and medium-sized enterprises with financial assistance in the form of grants and low interest loans to be applied towards HACCP implementation costs including capital costs.**

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[97] "Food Premises" as defined in the *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.

Mandatory HACCP should be implemented with an appropriate phase-in period to provide additional time for SMEs to comply. Mandatory HACCP in larger operations should be implemented as soon as possible and within a period not exceeding one year. With respect to SMEs, I would suggest that the phase-in period occur over a period of two to three years with specific deadlines for implementation over these four stages.

1. implementation of all prerequisite programs;
2. HACCP studies to identify specific areas that need additional control;
3. development of valid CCP control measures and monitoring routines; and
4. full HACCP implementation including appropriate systems of verification and review.

During the Review, some operators of smaller plants expressed some frustration that they were doing their best to comply with all food safety laws and regulations, but that the rules were constantly changing. As an example, one operator explained how substantial capital investment had been made in the business to improve facilities with the knowledge and approval of an OMAF official only to find shortly thereafter that the standards had changed and the renovated facility was not in compliance with current requirements.

It must be recognized that producers of food in Ontario need to have assurance that as a result of their investment and efforts, they will achieve a reasonable rate of return. A producer who is not profitable will not continue to operate indefinitely. These producers need an opportunity to plan for changes that will impact their business. They need a reasonable opportunity to know the expectations that will be placed upon them and have an opportunity to budget for implementation of those requirements to avoid undue financial stress.

The goal of food safety requirements including HACCP is not to destroy producers' livelihoods, but is rather to implement a system of making food production safer in such a way that will be better for the consumer as well as for the producer. For that reason, the provincial government should develop the mandatory HACCP plan for each sector at the earliest opportunity in consultation with industry, organizations and producers. Once these plans are finalized, a reasonable time frame should be set for their implementation. Government, however, should give producers the earliest notice of its intention to implement mandatory HACCP and any other mandatory requirements so that producers can start to plan and budget in order to meet what will be expected of them.

I recommend that in developing mandatory HACCP-based food safety programs, the provincial government establish clear food safety objectives and prioritize hazards along the food continuum to ensure the areas of greatest risk are effectively identified and managed.

3.15 Traceability

3.15.1 Introduction

An ideal food safety system has an infrastructure to trace the origins and destination of whole and processed food and their inputs.[98] Traceability is an important component of a comprehensive food safety system for two reasons, namely, disease control in the event of an outbreak and emergency food recalls. It also increases consumer confidence. Traceability is the ability to trace the history and location of an item by means of recorded identification. Common elements of any traceability system are unique identifiers for each item traced, a data capture and transfer system and a recording system which allows for reliable management of the information as the item moves from one place to another.[99]

The importance of traceability was seen in the recent case of a BSE positive dairy cow in the U.S., where traceability mechanisms in the dairy industry in Canada and the U.S. were used to identify the exact Alberta herd from which the animal originated, allowing a concerted disease control effort to focus on other cows from the same herd. In light of the importance of traceability to food safety, governments have an important role to play in the development and ultimate implementation of traceability systems.

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[98] *Expert Advisory Panel Report, supra* note 1, p. 134.

[99] OMAF, *On-Farm Food Safety Strategy for Ontario, Background Paper Working Group 5: Traceability* (16 January 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/back_gr5.htm [accessed 20 May 2004].

Traceability will improve meat safety as there will be ongoing accountability for the wholesomeness and safety of the meat product from farm to fork. In addition, in the event a meat safety problem is identified at any point in the continuum, there is the ability to follow the path of the meat product to determine the origin and cause and to reduce or eliminate its adverse impact. Traceability also helps with herd/flock management and inventory control and is important to industry branding and quality assurance programs and organic certification.[100]

The ability to trace meat from initial production to consumer sale is a difficult and complex process. Traceability relies upon science and technology to create systems that are effective and affordable together with properly trained people to implement them. Traceability systems using radio frequency identifiers are now widely in use and traceability systems using DNA fingerprints are under development for commercial usage.[101] Traceability is continuing to evolve, as new technologies and standards are being developed to make it feasible from farm to fork.

3.15.2 Definition of Traceability

While there is widespread international support for traceability, there is considerable disagreement as to its definition and scope of application.[102] The Codex Committee on General Principles is currently attempting to define traceability/product tracing of food and to develop principles for its application.[103]

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[100] *Ibid.*, p. 2.

[101] Beef Improvement Ontario is currently testing DNA tracing in cattle. The Ontario Sheep Marketing Agency is undertaking a pilot project using DNA technology to trace lamb from farm to retail. Maple Leaf Foods Inc. is developing a product identification program for pork using DNA technology.

[102] Codex Alimentarius Commission, *Definition of Traceability/Product Tracing of Foodstuffs, Government Comments* , Codex Committee on General Principles, 20th Sess., CX/GP 04/20/6-Add.1 & 2 (Paris, 3-7 May 2004).

[103] The definition of traceability being considered by the Codex Alimentarius Commission relates to tracing as a tool to promote food safety and fair trading practices as well

The proposed definition being considered is as follows:

> *The implementation of measures to ensure, at any stage of the food chain, that the path of a food and the relevant information about it are known including:*
>
> - *product identification, a unique means to identify a food or batch thereof;*
> - *product information;*
> - *the raw materials used;*
> - *how it was changed (if appropriate);*
> - *where and when it came from and where and when it was sent (one step backward and one step forward);*
> - *the controls, which the product has been subject to; and*
> - *the linkages between product identification and product information.*[104]

Traceability has two key components, tracking and tracing.[105] Tracking is the ability to follow a product's path as it moves through the continuum forward from the point of production to the point of consumption. In the meat industry, animal identification and tracking systems allow for an animal's movement to be followed over time, identifying and recording all locations of the animal over its lifetime. Tracking systems may include the physical identification of the individual animal or group of animals (flock) and the recording of details of health treatments and movements.

Tracing, on the other hand, is the ability to identify the origin of a product or group of products by moving upstream in the continuum to trace the history of its production back to the point of origin.[106] Although the terms tracing and/or tracking are sometimes used interchangeably, the paths they describe go in opposite directions. Animal identification must be distinguished from traceability, as it is usually just the first step in a traceability program.

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[104] Codex Alimentarius Commission, *Definition of Traceability/Product Tracing of Foodstuffs, Government Comments, supra* note 102, Appendix I.

[105] The Electronic Commerce Council of Canada, *Can-Trace Initiative: Tracking and Tracing of Food Products in Canada* (9 December 2003), p. 5., available from http://www.can-trace.org/About/docs/TrackingAndTracingInitiativeWhitePaper.pdf [accessed 18 June 2004].

[106] *Ibid.*, p. 15.

Premises identity is also an important component of a traceability system as all premises that hold a commodity need to be identified and recorded.

3.15.3 Development of Traceability Models

The development of traceability models and the necessary technology to implement them has been driven by industry. Traceability creates access to new markets and the ability to preserve the identity of a product's quality and content and inventory management processes. There are many different traceability models in use around the world that generally follow one of three patterns. The one-up/one-down system is the simplest and most common system and requires that specific products received and products shipped be documented along the continuum. The commodity/segment system focuses on a particular commodity and its route through the continuum from raw material to point of sale. The central data management system involves the centralization of data related to the product and allows easy and rapid tracing of a product along the continuum. [107]

Throughout the world, a number of industry groups and organizations have developed standards for product identification and tracing.[108] The bar codes seen on various products are examples of these international standards. In the food industry, European Article Number and Uniform Council Code (EAN.UCC)[109] systems are widely accepted commercial identification and communication standards. EAN.UCC has developed models specifically for meat which provide for product traceability from a live animal through to the point of retail sale.[110]

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[107] *Ibid.*, p. 12-14.

[108] *Expert Advisory Panel Report*, *supra* note 1, p. 16.

[109] EAN International, News Release, *United Nations recommend EAN•UCC System for the identification of Meat Carcasses and Cuts* (21 March 2001), available from http://www.ean-int.org/pressreleases/Meat%20Carcasses%20and%20Cuts.html [accessed 3 June 2004]; The Electronic Commerce Council of Canada, *Can-Trace Initiative: Tracking and Tracing of Food Products in Canada*, *supra* note 105, p. 15; EAN International, *About EAN International: History*, available from http://www.ean.int.org/history.html [accessed 19 May 2004]; The Electronic Commerce Council of Canada, *Can-Trace Initiative (Roadmap document): Industry Action Plans for the Development of Common Standards for the Tracking and Tracing of Food Products in Canada, Final* (5 December 2003), available from http://www.can-trace.org/About/docs/WEBRoadmap%20V2.pdf [accessed 4 June 2004].

3.15.4 Traceability in Other Jurisdictions

Traceability is a much-discussed issue worldwide. However, few countries have developed a full traceability system that operates throughout the food continuum. Many countries have animal identification programs that track animals from the farm to the abattoir. A significant number of countries are expanding their animal identification programs toward a complete traceability system. There is also a movement toward making traceability systems or parts thereof mandatory. Belgium, New Zealand, Ireland and the U.K. have shown leadership in developing mandatory traceability systems. In the U.K., outbreaks of BSE and foot and mouth disease (FMD) were the catalysts for these initiatives. In Belgium, food contamination that resulted from the discovery of dioxin in animal feed was the impetus for the development of a mandatory animal identification program in 1999. New Zealand, which relies heavily on agriculture, undertook mandatory traceability in order to preserve and enhance its access to international markets.[111]

In the European Union, all livestock are required to be tagged within 20 days of birth. Each animal is given an identification code which follows the animal through a mandatory meat labelling system. A passport is issued for livestock containing the identification code, birth date, sex, breed or coat colour, identification code of the dam and sire, identification code of the farm of birth and all farms where the animal has been kept. The passport must accompany the animal through all movements. The European Community has adopted various other regulations to promote the traceability of all food products. New regulations scheduled to come into force in January 2005 will place traceability obligations on all operators in the food system.[112]

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[110] The beef model starts with each animal having an ear tag number and a valid passport or health certificate to the abattoir where a carcass ticket is produced with appropriate bar code which then becomes a processing label as the meat is cut and then ultimately a consumer label of the packaging at the point of sale. The bar code system contains various information in respect of the meat which enables the product to be traced back to the specific live animal.

[111] OMAF, *On-Farm Food Safety Strategy for Ontario, Background Paper Working Group 5: Traceability, supra* note 99.

Primarily in response to BSE, Japan has legislated a compulsory system of full traceability of cattle from farm to retail sale. Each animal's identification number, breed, sex and production history is entered into a national database.[113]

The U.S. is in the process of implementing an animal identification program.[114] The U.S. legislation on Country of Origin Labelling (COOL) will require mandatory tracking and labelling for beef, lamb, pork, fish and a number of other items.[115] At present, the system is voluntary. Due to domestic and international opposition, the COOL provisions were amended in January 2004 to delay its implementation until September 30, 2006, except for fish and seafood for which COOL will be mandatory on September 30, 2004.[116]

3.15.5 Traceability of Meat in Canada

In Canada, the federal government, through its Agricultural Policy Framework, has set a goal to put in place comprehensive tracking and tracing systems throughout the food continuum and has set an ambitious objective of achieving 80% traceability for Canadian foods by 2008. One of the stated purposes of this goal is to increase the capacity for targeted, effective responses to potential disease or contamination outbreaks.[117] The goal, however, requires industry to take the lead in defining traceability standards and solutions.

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[112] Quebec, *Emerging Food Safety Issues in Quebec: Discussion Paper*, (Quebec: Secretariat des Commissions, National Assembly, 2003), p. 29; C. Peck, ed., *Around the ID World*, BEEF (1 December 2003), available from http://articles.findarticles.com/p/articles/mi_m0HDV/is_4_40/ai_111090901 [accessed 25 May 2004].

[113] *Ibid.*, C. Peck, ed., *Around the ID World.*

[114] *Ibid.*

[115] *Farm Security and Rural Investment Act of 2002*, Public Law 107-171, May 13, 2002.

[116] C. Hanson, *Industry groups unite over voluntary COOL* (26 May 2004), available from http://www.meatingplace.com [accessed 4 June 2004].

[117] The Electronic Commerce Council of Canada, *Can-Trace Initiative: Tracking and Tracing of Food Products in Canada, supra* note 105, p. 5.

The Canadian food industry, through an initiative called "Can-Trace", is working to develop the framework for a Canadian food traceability system.[118] In April 2004, Can-Trace released draft traceability standards which are being tested and validated in pilot projects involving beef and pork.[119]

In Canada, there is no national strategy for traceability that allows meat to be traced from farm to fork. The Expert Advisory Panel has noted:

> *The current fragmentation of the federal and provincial food system does not lend itself to a seamless tracking of products and because of this it is likely that commodity groups will create their own specific systems in response to buyer requirements. The technology to support a traceability system infrastructure is available, but the methods and barriers to effective implementation have been inadequately researched to date.*[120]

3.15.6 Animal Identification and Tracking in Canada

In Ontario and throughout Canada, cattle identification and tracking is undertaken pursuant to the Canadian Cattle Identification Program administered by the Canadian Cattle Identification Agency (CCIA).[121] The CCIA is a non-profit industry-based agency that developed animal identification, herd of origin and tag retirement programs for cattle and bison.[122] Since January 1, 2001, the program has been mandatory.[123] The CCIA administers the program on behalf of the federal government. Under the program, an approved ear tag displaying a specific number is attached to each animal prior to leaving their herd of origin. The tags are to be retired when the animal is disposed of through slaughter or other means. Animals that lose tags are to be re-tagged. The CCIA system only traces the animal to the point of carcass inspection. Participation in the program has been expanded in 2004 to include sheep.[124] All information reported to the CCIA is entered into a confidential database. In the event of a health or safety issue involving an animal, CFIA is provided access to the database.

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[118] The Can-Trace project is being undertaken by the Electronic Commerce Council of Canada (ECCC), which is the Canadian counterpart of EAN-UCC. See http://www.can-trace.org/About/?langid=e&pageid=main.

[119] Representatives of the federal government and four provinces, including Ontario, participated in the early group drafting these standards.

[120] *Expert Advisory Panel Report*, *supra* note 1, p. 15.

[121] Canadian Cattle Identification Agency, Details of the Canadian Cattle Identification Program, available from http://www.canadaid.com/about/details.shtml [accessed 3 June 2004].

[122] Canadian Cattle Identification Agency, *What is CCIA?*, available from http://www.canadaid.com/about/what_is.shtml [accessed 19 May 2004].

[123] Participation in the program is mandatory for all Canadian cattle, bison and sheep under the authority of regulations under the *Health of Animals Act*. The Canadian Livestock Identification Agency (CLIA) will assume responsibility for this program.

The current system has a number of limitations. The information that is traced is restricted to herd of origin. There are problems with lost ear tags, tag collection and information reporting; all of which create gaps in the ability to trace an animal from farm to the abattoir.

There will be improvements when the current bar coded tags are phased out by 2005 and replaced with electronic tags using radio frequency technology. These radio frequency identification tags will allow additional information to be tracked including birth date, age and pedigree of the animal as well as all animal movements. This will be important in respect of cattle in establishing whether an animal is 30 months old or older, as BSE precautions and surveillance are generally aimed at these older cattle.[125]

The Province of Quebec has the most advanced system of cattle traceability in Canada with a system that provides for full traceability/tracking fom birth to processor. Currently, the program applies to cattle only but is to be extended to sheep and hogs. Electronic identification tags which meet all requirements of CCIA must be applied on all cattle within seven days of birth and replaced within seven days, if lost. Producers or their proxies are required to activate the tags in the government database. The system tracks the animal's place of birth and all of its movements within Quebec. The system requires the traceability link to be established within two hours of a tracing request and each establishment is required to conduct an annual evaluation of the traceability system both upstream and downstream.[126] Quebec is currently considering expanding its traceability system to trace meat from the processor to retail sale.

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[124] The Canadian Sheep Identification Program (CSIP) was implemented January 2004 and traces animal movement.

[125] Canadian Cattle Identification Agency, *CCIA Assistance to BSE Investigation*, CCIA News (Spring 2004).

3.15.7 Traceability in Ontario

While Ontario does not have a formal traceability program, OMAF has been working on such a program and has been supportive of various national traceability initiatives. As part of OMAF's on-farm food safety strategy (OFSS), a working group was created with a view to developing an action plan for traceability including premises identification and registration. This working group has put forward two recommendations now also approved by the OFSS Steering Committee. These recommendations are the formation of a non-governmental traceability entity in Ontario working within the national framework and the development of a premises identification model that would uniquely identify Ontario farm premises.[127]

At the present time, there are no plans nor initiatives underway in Ontario to develop a traceability program that would operate throughout the food continuum. The current focus is on birth to slaughter of animals.

One traceability initiative that OMAF is involved in is the barbeque pig identification and certification program designed to ensure residue-free weaner and suckling pigs. As part of that program, OMAF created and now maintains a database of the performance record of each barbeque pig producer and row adjusts the frequency of residue testing accordingly.[128] There has been a substantial reduction in residues since the program was introduced. This initiative suggests that if a traceability system is in place, it will be easier to identify and to correct pathogen, disease or residue issues whatever their source.

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[126] *Emerging Food Safety Issues in Quebec, supra* note15, p. 32-35; OMAF, *On-Farm Food Safety Strategy for Ontario, Background Paper Working Group 5: Traceability, supra* note 99, p. 9.

[127] OMAF, *Traceability Working Group 5: Final Progress Report* (19 April 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/prog_gr5.htm [accessed 3 June 2004].

[128] OMAF, *On-Farm Food Safety Programs in Ontario, Discussion Paper* (March 2002), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/background.htm [accessed 3 June 2004].

OMAF is also playing an important role in facilitating the retirement of tags under the CCIA program. The obligation to retire tags placed on abattoirs is an onerous one, particularly on small and medium enterprises.[129] In order to assist smaller abattoirs OMAF's meat inspectors have been recording retired identification numbers at small abattoirs, about 87,000 cattle tags each year, and providing them to Beef Improvement Ontario (BIO) which forwards the information to the CCIA. BIO has developed software which enables meat inspectors to electronically communicate retired tag numbers to BIO.[130]

At the present time, there are many different animal identification/ traceability initiatives underway led by industry and supported by government.[131]

Because of the regular movement of livestock across provincial boundaries, animal identification and tracing systems should be national in scope. Ontario should continue to work with the federal government, other provincial governments and industry to expedite the process of developing a national strategy for traceability which should include traceability across the meat production continuum.

The Expert Advisory Panel has recommended that all sectors of the meat industry develop effective food safety traceability systems and that all commodity groups develop programs for the transfer of relevant animal health and on-farm food safety information that would accompany animals sent from farm to slaughter.[132] I agree with these recommendations, but I also believe that the provincial government should play a role in working with industry and commodity groups to facilitate the development and implementation of these programs. There is a need to develop a farm to fork traceability system for Ontario which is both effective and affordable.

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[129] *Health of Animals Regulations*, C.R.C., c. 296, ss.186 & 187.

[130] BIO is a beef industry operator organization actively involved in the development of new animal identification and traceability systems in conjunction with government.

[131] For a good summary of national, provincial and industry led initiatives on traceability in Canada see OMAF, *On-Farm Food Safety Strategy for Ontario, Background Paper Working Group 5: Traceability*, *supra* note 105.

[132] For example, the Canadian Sheep Federation has developed a voluntary Food-Safe Farm Practices Program which includes detailed shipping records that outline each animal's identification number, medication/animal health products administered and physical residues. See http://www.cansheep.ca

Traceabililty systems are commonly seen in the distribution and retail sectors where, through the use of bar codes and similar international standards, many products can be readily traced at least back to the point of packaging. However, not all retailers are currently using these labelling systems. This information and ability to trace using timely and accurate information is especially important in food recalls. For example, the recall of meat from Aylmer Meat Packers Inc. in August 2003 was hampered by the lack of a current and accurate list of retail stores who purchased their meat from this plant. As a result, the government agencies could not accurately identify all retail stores who had purchased meat from this operation in order to ensure withdrawal of the meat and to warn the public. Also, because lists were out of date, some retailers who had not purchased meat from this plant for sometime were being incorrectly identified in the public announcements. These problems could easily have been avoided if the information had been kept current.

While industry has taken a lead in developing traceability systems throughout the retail and distribution sectors, there is a need to ensure that the system places a mandatory obligation on all producers, distributors and food premises to maintain accurate information regarding the purchase, distribution and sale of their products. This information must be readily available to authorities with recall powers.

With new technologies and industry support, the ability to develop such a traceability system is achievable. Once the system is developed, the provincial government will need to enact the required legislative and regulatory framework to ensure there is full and mandatory participation in the program. Traceability requires the disclosure of information that is, in part, confidential and proprietary in nature. Legislation will be required to mandate the disclosure of information to facilitate effective traceability. Safeguards should be included to ensure that confidential or proprietary information disclosed to facilitate traceability is otherwise protected and proprietary rights maintained.

I recommend that the provincial government work together with industry and commodity groups as well as the governments of Canada and the other provinces to develop a national strategy for traceability.

I recommend that the provincial government in conjunction with commodity and industry groups develop an effective meat safety traceability system for Ontario designed to allow meat to be traced across the food continuum.

The traceability system for Ontario should include a system which will facilitate the collection and flow of all important information regarding animals, including place and date of birth, all movements, health, medications and feed history.[133] I also believe that in the development of a traceability system consideration should be given to a passport or other record-keeping system for each animal or flock to allow the information to follow the animals from the farm of origin to the place of slaughter and subsequent processing.

3.15.8 Premises Identity

Premises identity is an important component of a traceability system, particularly in the event of a disease outbreak, as we have seen recently in British Columbia with Avian Influenza.[134] For a traceability system to function, all premises holding product need to be identified and recorded. Knowledge of locations and densities of farms in an area is an important tool for epidemiologists to forecast potential outbreaks, track the spread of disease and make timely decisions for appropriate action.

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[133] *Expert Advisory Panel Report*, *supra* note 1, p. 15-16.

[134] On March 11, 2004, the federal Minister of Agriculture declared BC's Fraser Valley as a control area to prevent the spread of avian influenza. A high risk region, a 5 km zone and a surveillance region, a further 20 km zone around the initial positive case were also established. Live birds could not be moved outside the control area and biosecurity measures were put into effect. Approximately 19 million birds were depopulated including commercial establishments and backyard flocks. As of June 18, the response shifted to decontamination and surveillance. See CFIA, *Avian Influenza*, available from http://www.inspection.gc.ca/english/anima/heasan/disemala/avflu/avflue.shtml [accessed 18 June 2004].

Currently, a comprehensive list of farm and food processing locations does not exist at either the provincial or national level. A number of commodity group initiatives are already underway in Ontario including:

- the Dairy Farmers of Ontario (DFO) has mapped all dairy farms shipping milk. The bulk-tank storage locations have been recorded into a Geographic Information System (GIS)[135] maintained and used by the DFO to route milk trucks and be available in the event of a disease outbreak.
- the poultry industry (chicken, eggs and turkeys) has all of its producer locations in the province mapped using the Global Positioning System (GPS).[136] Individual barns are not mapped.
- Ontario Pork recently completed a premises identification project that has recorded GPS coordinates for each hog operation in the province in a database to be used in the event of a Foreign Animal Disease (FAD) outbreak.
- the Ontario Cattlemen's Association has developed a GIS template, which includes mapping pastures and facilities used by Ontario beef cattle. The primary goal is to provide assistance in the event of a FAD outbreak.

Quebec has developed a livestock premises identification system as part of its provincial livestock traceability system, which is coordinated through Agri-Traceability Quebec. The system is voluntary, but there are financial incentives for participating.[137]

At the federal level, the CCIA and others have developed a national template for premises identification in Canada. It would integrate geographically referenced livestock data from multiple sources into a standardized up-to-date model and be accessible to support a national livestock identification and traceability program as well as all agencies involved in FAD mitigation. The project is awaiting further funding.[138]

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[135] GIS involves mapping relevant data using geographic coordinates and software patterns analysis and decision making.

[136] GPS is a satellite navigation system enabling a receiver to compute their global location.

[137] OMAF, *On-Farm Food Safety Strategy for Ontario, Background Paper Working Group 5: Traceability*, *supra* note 99.

The USDA has also recently announced the framework for the implementation of a national animal identification system to identify all premises where livestock are held in the U.S.[139]

As stated earlier, OMAF's Working Group on traceability has recommended the development of a model in order to identify all Ontario farm premises. In Ontario, farm businesses that declare gross farm income of $7,000 or more are required to register, but many farms are not required to do so.[140] The registration data is not used as part of the traceability system. There are challenges in securing the participation of hobby farmers in a voluntary initiative since these farmers often are not members of the commodity groups and may not be registered as a farm. While the numbers of animals raised on these farms is usually small and, therefore, a lower risk, it remains important to identify them for the purpose of disease surveillance and emergency response. A mandatory registration program for all livestock premises is the only way to ensure all farms are identified.

I recommend that the provincial government in consultation with the federal government and stakeholders support the development of mandatory registration for all livestock farms in Ontario.

3.15.9 Feed Identity

Feed is generally regulated under the *Feeds Act* (Canada).[141] Many farmers mix their own feed and the regulations that apply to feed manufacturers apply on-farm with respect to feed safety. One of the most important safety considerations for any feed manufacturer is to be able to trace every ingredient used throughout the manufacturing process. Representative sampling of each incoming ingredient and of each finished feed is crucial to this process. The samples are labelled by origin and date. If a problem develops with a load of feed, the retained sample can be analyzed in a laboratory to determine the cause and to ensure corrective actions are taken. Similar records and retained samples are important on-farm with respect to purchased feed.

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[138] *Ibid.*

[139] *Food Traceability Report* (Vol. 4, Issue 5, 1 May 2004), available from http://www.foodtraceabilityreport.com/ejournals/issues/issue_archive.asp?section=1065 [accessed 3 June 2004].

[140] *Farm Registration and Farm Organizations Funding Act, 1993*, S.O. 1993, c. 21 and O. Reg. 723/93.

[141] *Feeds Act*, R.S.C. 1985, c. F-9.

On-farm food safety programs should reinforce the need to keep these records.[142] Because the feed fed to livestock can impact the safety of the meat produced, I believe that Ontario's traceability program should include feed. I believe that the provincial government should ensure that feed monitoring is included as part of the traceability system developed for Ontario.

3.16 Biosecurity

Biosecurity is a relatively new concept that is rapidly gaining prominence in any discussion of food safety. Biosecurity measures became prominent as a result of worldwide efforts to prevent the spread of F.M.D. during the outbreak in the U.K. in 2001 and in the aftermath of the September 11, 2001 terrorist attack in the U.S. Biosecurity in food and agriculture encompasses all policy and regulatory frameworks that manage risks associated with food safety,[143] animal life and health, and plant life and health. Biosecurity applies to food production and addresses the deliberate or inadvertent introduction of pests, diseases and zoonoses.[144]

Government has a role in biosecurity by developing a strategic and integrated approach to analyzing and managing these risks.[145] While biosecurity measures are necessary to protect agriculture, the food industry and the environment, they also play an important role in protecting human health and consumer confidence in food.[146] Biosecurity programs will benefit producers in terms of healthier animals, improved animal welfare and well-being, and improved efficiency and profitability.[147] Government also has an important responsibility to provide timely information and advice to producers regarding actions to be taken in the event of a disease outbreak.

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[142] For example, the OVQA on-farm food safety program provides a feed inventory form and gives instructions for taking and storing representative samples from different types of feed. By law, every load of manufactured feed must be accompanied by a feed tag, which should be kept in farm records. It is also suggested that samples be kept from premixes and supplements.

[143] FAO, *Biosecurity in Food and Agriculture: Scope and Relevance, Report of the Expert Consultation on Biosecurity in Food and Agriculture*, TC/BRM 03/02, (Rome, 10-13 September 2002).

[144] A. Torres, *A New International Theme: "Biosecurity" in Food and Agriculture Discussions at the FAO* (2003), available from http://www.animalagriculutre.org/Proceedings/203%20Proc/Torres.htm [accessed 15 June 2004].

[145] FAO, *Introduction to Biosecurity*, available from http://www.fao.org/biosecurity/ [accessed 15 June 2004].

Biosecurity measures are implemented at different levels. At the local level, herd biosecurity is undertaken by the herd owner to try to exclude any disease that is not already present in the herd or limit the spread of disease within the herd.[148] To be successful, herd biosecurity plans should address how groups of animals will be isolated from others, how the movement of people, animals and equipment will be regulated to avoid disease transmission and how cleaning and disinfection procedures will be used to reduce pathogen levels.[149] Examples of herd biosecurity measures include animal vaccinations, nutrient management, controlling and limiting livestock movement, visitor control, and sanitation of clothing, boots, equipment and vehicles.[150]

Biosecurity measures may also be taken at the national and provincial levels. Australia and New Zealand were among the first countries to establish national programs on biosecurity.[151] Biosecurity measures go hand in hand with good traceability and surveillance systems as they are also designed to provide early detection and isolation and/or zoning of disease to minimize its impact.

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[146] FAO, Committee on Agriculture, *Biosecurity in Food and Agriculture*, 17th Sess., (Rome, 31 March –4 April 2003), p. 2, available from http://www.fao.org/DOCREP/MEETING/006/Y8453E.HTM [accessed 15 June 2004].

[147] G. Bowman & W. Shulaw, *Biosecurity Fundamentals for Extension Personnel* (Ohio State University, 2001), available from http://www.gov.on.ca/OMAFRA/english/livestock/biosecurity/facts/extension.htm [accessed 3 June 2004].

[148] *Ibid.*

[149] *Ibid.*

[150] J. Dalrymple & P. Innes, OMAF, *Biosecurity Fundamentals for Visitors to Livestock Facilities* (February 2004), available from http://www.gov.on.ca/OMAFRA/english/livestock/vet/facts/04-003.htm [accessed 4 May 2004].

[151] FAO, *Toward Biosecurity*, Agriculture 21, available from http://www.fao.org/ag/magazine/0103sp1.htm [accessed 26 May 2004].

In the U.S., biosecurity of the food supply has become a significant issue, partly as a result of the recent concern over bioterrorism. The FSIS has developed a plan and infrastructure to address biosecurity issues in order to protect food production, processing, storage and distribution, to respond to threats against the agricultural sector and to address the risk of outbreaks of foodborne illness.[152]

In Canada, the CFIA has developed strategies to address biosecurity and to promote the security of Canada's food supply.[153] In addition, the CFIA is addressing emergency preparedness to achieve a state of readiness to ensure an effective and rapid response to food safety, animal food safety or animal disease emergencies.[154] These strategies were in operation during the course of the Review in responding to the outbreak of Avian Influenza in poultry flocks in British Columbia.

It is important for Ontario to do its part to promote biosecurity. This should include working with commodity groups to develop and implement on-farm biosecurity plans and ensuring that timely communication links to producers are in place. Many industry and commodity groups currently have or are developing biosecurity plans and measures. On-farm biosecurity should be a component of on-farm food safety programs.

In the development of a biosecurity plan, it is important to address the biosecurity risk associated with government inspectors, auditors, investigators and veterinarians who are required to enter farms and plants. Biosecurity plans must not interfere with their ability to perform their regulatory functions, however, government personnel should be properly trained in biosecurity measures and equipped to ensure that the risk of cross-contamination is minimized.

Biosecurity plans are also required at other stages of food production and need to be incorporated into all HACCP-based food safety programs. The provincial government should work with industry groups to develop and implement these measures throughout the food continuum.

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[152] USDA, FSIS, *Biosecurity and the Food Supply* (June 2002), available from http://www.fsis.usda.gov/OA/background/biosecurity.htm [accessed 26 May 2004].

[153] CFIA, *Corporate Business Plan 2003-2008*, available from http://www.inspection.gc.ca/english/corpaffr/busplan/2003-2008/indexe.shtml [accessed 3 June 2004].

[154] *Ibid.*, p. 22-29.

I recommend that the provincial government develop a biosecurity strategy and plan for livestock, poultry and meat products in Ontario. The provincial government should work with industry and commodity groups in the development of an overall biosecurity strategy for Ontario.

Ontario should also be part of a national biosecurity strategy. This strategy should encompass all aspects of biosecurity throughout the meat production continuum.

I recommend that the provincial government work in cooperation with the federal government, including the Canadian Food Inspection Agency, and other provincial governments to develop a national biosecurity strategy. This strategy should encompass all aspects of biosecurity throughout the meat production continuum.

3.17 Surveillance

3.17.1 Introduction

The surveillance of foodborne disease is an important component of any food safety program. In the context of public health, surveillance is the ongoing, systematic collection, analysis, interpretation, and dissemination of data regarding a health-related event for use in reducing morbidity and mortality and improving health.[156] Foodborne disease surveillance has a number of important purposes including:

- enabling prompt control measures for foodborne diseases and outbreaks;
- monitoring and interpreting trends in foodborne disease to assist in the design of preventative measures, educational activities and HACCP-based systems and to prepare risk assessments;

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[156] U.S., CDC, *Guidelines for Evaluating Surveillance Systems*, Morbidity and Mortality Weekly Reports (Vol. 37, No. S-5, 6 May 1988); and *Updated Guidelines for Evaluating Public Health Surveillance Systems*, Morbidity and Mortality Weekly Reports (Vol. 50, No. RR13, 27 July 2001), available from http://www.cdc.gov/mmwr/index.html [accessed 31 May 2004].

- measuring the burden of foodborne disease including the identification of populations at high risk, identification of new or emerging health concerns;
- estimating health and economic impacts of foodborne disease;
- evaluating the effectiveness of foodborne disease and prevention and control measures and strategies;
- identifying priorities and setting policy in the control and prevention of foodborne disease;
- guiding the planning, implementation, and evaluation of programs to prevent and control foodborne disease including emergency preparedness; and
- providing the basis for epidemiological research including the identification of emerging problems and the focusing of research in areas of high risk.[156]

The World Health Assembly, in 2000, adopted a resolution recognizing that food safety is an essential public health function and encouraging member countries *"to implement and keep national, and when appropriate, regional mechanisms for foodborne disease surveillance."*[157]

In the context of meat, foodborne disease surveillance has three distinct components:

- animal health surveillance;
- food hazard surveillance; and
- foodborne illness surveillance.

A good foodborne disease surveillance system requires that all three components be linked to each other. When integrated and reviewed on a regular basis, the data obtained from these three surveillance systems can provide useful insights into the sources and pathways of pathogens in the food chain.[158]

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[156] *Ibid.*, CDC, *Updated Guidelines for Evaluating Public Health Surveillance Systems*, p. 4; FAO/WHO, Global Form of Food Safety Regulators, January 2002, Conference Room Document Proposed by the WHO, GF/CRD WHO-2, http://www.fao.org/DOCREP/MEETING/004/AC114E.HTM; OMAF, *Ontario Food Safety Strategy - Surveillance Component Team Report* (November 1998).

[157] WHO, WHA Res. 53.15, 53rd World Health Assembly (20 May 2000).

Surveillance systems may be classified as being passive or active. Passive systems rely upon reporting of notifiable diseases on a case-by-case basis by laboratories and veterinarians in respect of animals and by physicians in respect of humans. These systems are efficient for tracking disease over a period of time, but reporting is often incomplete and may not allow an outbreak to be promptly identified or disclose the true incidence of the outbreak.[159] Active surveillance, on the other hand, involves regular outreach for information to identify and obtain data in respect to specific conditions. A comprehensive system requires both active and passive surveillance.[160]

3.17.2 Animal Health Surveillance

Surveillance of animal health is increasingly important to food safety and public health. At the farm, the main focus is on the ability to detect zoonotic animal diseases, which can enter the food chain and cause foodborne illness to humans. Once the diseased animal is identified, it can be properly treated or removed from the food chain altogether. Disease surveillance is crucial for HACCP programs to help identify CCPs and to evaluate the success of the program in reducing pathogens.

Both the federal and provincial governments have important roles to play in animal disease surveillance. To be effective, they need to collaborate in their surveillance efforts.

The CFIA's Animal Disease Surveillance Unit (ADSU) is responsible for animal disease surveillance at the federal level and also to ensure that

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[158] *Expert Advisory Panel Report*, *supra* note 1, p. 52.

[159] OMAF, *Ontario Food Safety Strategy - Surveillance Component Team Report*, *supra* note 156, p. 3.

[160] Organization for Economic Cooperation and Development, Directorate for Food, Agriculture and Fisheries, *The Incidence and Cause of Foodborne Illness*, AGRI/CA/APM (2002) 28/Final (10 September 2003).

Canada has current knowledge of international devebpments in animal disease outbreaks, surveillance methods and identification approaches.[161]

The CFIA's laboratories are responsible under the *Health of Animals Act* for the detection, research, and scientific advice for diseases exotic to Canada and some indigenous disease that are of national or public health significance.[162] Animal disease surveillance is undertaken utilizing a nation-wide network known as the Canadian Animal Health Network (CAHNet). CAHNet is a partnership including representatives of federal, provincial and territorial veterinary services, diagnostic laboratories,[163] veterinary colleges, veterinary practitioners, producer organizations and wildlife interest groups.[164] CAHNet's role includes educating producers and practitioners of the need to report animal disease problems.

The ADSU and CAHNet are expected to facilitate a timely method of distribution of animal health related information across Canada and internationally, with the Office International des Epizooties (OIE).[165]

In Ontario, animal health surveillance is undertaken by OMAF through the Ontario Animal Health Surveillance Network (OAHSN). OAHSN comprises a network of professionals of veterinary science, animal health, food inspection and extension education. The OAHSN monitors a range of surveillance data, generated largely by veterinarians sending in samples from farm animals, animals rejected at sales barns and animals identified at abattoirs. The Animal Health Laboratory at the University of Guelph in Ontario generates surveillance data and the OAHSN monitors the data for unusual trends. OAHSN also monitors the number of a species collected by deadstock collectors in Ontario for unusual trends.

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[161] CFIA, *Animal Disease Surveillance*, available from http://www.inspection.gc.ca/english/anima/surv/surve.shtml [accessed 15 June 2004].

[162] *Expert Advisory Panel Report*, *supra* note 1, p. 55.

[163] Health Canada has health of animals laboratories at 16 sites across Canada including Guelph.

[164] Canadian Animal Health Network, *About Us: CAHNet in General*, available from http://www.cahnet.org/general.htm [accessed 15 June 2004].

[165] The OIE is an intergovernmental organization which was created in 1924. The OIE collects and analyses animal disease information and distributes it to member countries. See http://www.oie.int/eng/en_index.htm.

In addition, several commodity groups have established specific surveillance programs, often in collaboration with OMAF. For example, OAHSN is linked to the Ontario Swine Health Information Plan run by OMAF for 32 swine breeding herds. Under the plan, a minimum of four herd-health visits are conducted per year by OMAF veterinarians and private practitioners. Quantitative assessments of biosecurity, health, medications and vaccinations are conducted.[166]

This initiative and others illustrate how coordinated and integrated programs can be delivered on-farm. OMAF, in collaboration with all commodity groups, should be encouraged to develop specific disease surveillance programs.

It is important for Ontario to have an effective animal health surveillance system that is appropriately integrated with the surveillance systems monitoring food hazards and foodborne illnesses. The provincial government should collaborate with the federal government, CFIA and the other provinces to develop a national strategy and program for animal health surveillance. In order to ensure that the animal health surveillance system is functioning properly and to ensure that it is properly integrated with the provincial foodborne disease surveillance, I believe that it should be overseen by a Chief Veterinarian of Ontario (CVO) whose role and responsibilities I will outline later in my Report.

3.17.3 Food Hazard Surveillance

Another essential component of an effective foodborne disease surveillance system involves the surveillance of the food product itself. In the context of meat, this includes surveillance of laboratory testing of foodborne pathogens, drug and other chemical residues.

3.17.3.1 Abattoirs and Meat Processors

In Ontario, OMAF undertakes a variety of programs for foodborne hazard surveillance in provincially licensed abattoirs. There are over 50 testing projects included in OMAF's meat inspection program.[167] These testing projects target such things as microbiological hazards, antimicrobial residues, pesticides, heavy metals, anabolic hormones, water and ice, microbiological quality, histopathology of meat inspection specimens, parasitology, and BSE surveillance testing.[168]

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[166] OMAF, Ontario Animal Health Surveillance Network, *Surveillance Coverage of Livestock Populations at Risk*, available from http://www.gov.on.ca/OMAFRA/english/research/oahsn/ahsn4.html#Swine [accessed June 16, 2004].

The laboratory testing projects which form part of OMAF's meat inspection program may be categorized into three groups: surveillance projects, monitoring projects and baseline studies and pathogen monitoring projects. Surveillance projects address high risk issues such as non-ambulatory animals, antibiotic residue testing and testing for sulpha drugs in barbeque pigs. In these projects, the carcasses are held until the test results are received and reviewed by a scientist. Monitoring projects are conducted using a random sampling plan and are designed to ascertain the level of risk associated with normal animals presented for slaughter for a particular substance. The carcasses are not held. The results of the testing are subjected to statistical analysis. Baseline studies and pathogen monitoring projects are designed to determine the levels of selected microbial pathogens and indicator organisms in carcasses of selected species. These projects also involve ready-to-eat meats produced from secondary processing. Carcasses and meat products are not held. The results of the testing are analyzed and used to establish performance standards which are used to measure operator performance.[169]

I was advised during the course of the Review that the funding for ongoing BSE and water testing to the levels recommended in the policies was not sufficient in the last two years.

I recommend that the provincial government provide necessary resources to ensure that disease surveillance, testing and reporting continue to the levels set out in the existing policies year round.

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[167] OMAF, *Meat Inspection Policy and Procedure Manual* (Revised, 1 June 2003).

[168] *Ibid.*; *Expert Advisory Panel Report*, *supra* note 1, p.58

[169] OMAF, *Meat Inspection Policy & Procedure Manual*, *supra* note 167, Section 08.00-Laboratory Testing.

The Food Safety Decision Support System (FSDSS) is the computer system used by OMAF to support its food inspection program including laboratory services and surveillance. In the area of testing and surveillance, the system has been designed to provide timely exchange of testing information and data as between the food inspection program and the laboratory. During the Review, I learned that meat inspectors who submit test samples are not given access to test results even though they are available in the FSDSS. It is important that meat inspectors have access to the results of all testing done at plants under their inspection through the FSDSS. This information will assist inspectors in their work and help them assess a plant's overall performance.

I recommend that the Ministry of Agriculture and Food ensure that on-site meat inspectors have access to the results of testing through the Food Safety Decision Support System.

On balance, it appears that the FSDSS system is a good one and, with appropriate ongoing upgrades, training and support, it will continue to improve the inspection services provided by OMAF.

At the present time, meat processors who do not engage in animal slaughter are not subject to the same type of testing and surveillance programs undertaken in provincially licensed abattoirs. This is not acceptable and needs to be corrected as food hazard surveillance is as important at free standing meat processors as it is at abattoirs.

3.17.3.2 Meat Retail and Distribution

At the present time, food retailers and distributors are subject to inspections by public health inspectors pursuant to the *Health Protection and Promotion Act (HPPA)* unless these operations are part of licensed abattoirs. Public health inspectors from Boards of Health are primarily responsible for undertaking testing in support of their food safety programs.[170] In general, the laboratory testing of food premises falls into these categories:

- illness and outbreak investigations where sampling of contaminated surfaces, food or other samples are taken by the inspector during investigation and matched with clinical samples from the affected individuals with a view to providing an epidemiological link;

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[170] *Expert Advisory Panel Report, supra* note 1, p.56.

- audit of food in high-risk food premises where environmental and food samples are collected on the basis of a risk assessment process that prioritizes premises based on various factors;
- special surveys done at the request of MOHLTC targeting specific products or premises as part of larger province-wide studies; and
- seizures where an inspector will seize and hold a product suspected to be a health hazard to the public and samples are taken to confirm the risk.[171]

It is difficult to facilitate any type of coordinated surveillance, given the involvement of 37 individual Boards of Health. For that reason, the MOHLTC must play an important role in developing and implementing a clear strategy with respect to surveillance of foodborne hazards in food premises currently under the inspection of Boards of Health. The MOHLTC does not appear to have a clear publicly articulated strategy for its surveillance programs. This, at least in part, appears to be due to the lack of direction and resources within the Public Health Branch of MOHLTC. I will outline the problems which I have identified within the Public Health Branch of the MOHLTC in Chapter 9.

From the information provided to the Review by the public health units and a review of the mandatory programs and guidelines set by the MOHLTC, it is clear that there is no standard testing program in place across the province for meat products at food premises. Testing varies across the province: some Boards of Health conduct random sample testing of food products;[172] others conduct testing during HACCP audits; others conduct testing of specific meats;[173] and there are some that conduct no testing of any meat products.

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[171] *Expert Advisory Panel Report*, *supra* note 1, p.57.

[172] During foodborne illness outbreaks, foodborne illness investigations or in response to public complaints.

[173] Health units identified dried meats and ready-to-eat sausages as products which are randomly tested.

3.17.4 Foodborne Illness Surveillance

The recognition of a change in the distribution of illness is an essential part of any program for the control of outbreaks of illness.[174] The Pennington Group in its report investigating an outbreak of *E. coli* 0157:H7 in Scotland describes the importance of a surveillance program in the following way:

> *The best surveillance system in the world cannot prevent outbreaks. However, early identification of an outbreak is an important element in aiding the investigation and management of the outbreak and in helping to ensure that it can be brought under control as swiftly as possible. Surveillance can help inform appropriate research and aid understanding of the epidemiology of infection, leading to improvements in the understanding of the organisms involved, the factors influencing outbreaks and the spread of infection and the most appropriate means to manage and control future outbreaks. In addition, sound surveillance data can inform policy decisions and form the basis for legislative change.*[175]

At the federal level, Health Canada has established a number of initiatives to undertake foodborne illness surveillance. The Canadian Enteric Outbreak Surveillance Centre (CEOSC) was established to enable public health professionals across the country to have quick and efficient access to enteric outbreak information. CEOSC allows outbreak information to be shared confidentially by health officials at various levels of government.[176]

In addition to this passive surveillance program, Health Canada is also involved in an active surveillance program, namely, the National Studies on Acute Gastrointestinal Illness which involves a study of enteric disease by surveying the general population, physicians, laboratories and public health authorities.[177]

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[174] The Pennington Group, *Report on the circumstances leading to the 1996 outbreak of infection with E. coli O157:H7 in Central Scotland, the implications for food safety and the lessons to be learned* (Scottish Office, 1998), Ch. 10, available from http://www.scotland.gov.uk/deleted//library/documents-w4/pgr-00.htm [accessed 4 June 2004].

[175] *Ibid.*

[176] *Expert Advisory Panel Report*, *supra* note 1, p.64-65.

[177] Health Canada, National Studies on Acute Gastrointestinal Illness, *Background*, available from http://www.hc-sc.gc.ca/pphb-dgspsp/nsagi-enmga/info_e.html [accessed 29 April 2004].

Recognizing that there are gaps in Canada's health surveillance systems, Health Canada also created the Canadian Integrated Public Health Surveillance (CIPHS) program as a strategic alliance of public health and information technology professionals designed to create an integrated, easy to use system which would allow for the capture, integration and forwarding of data by front-line health care workers in the course of their regular duties.[178] CIPHS has the potential to improve public health coordination by standardizing processes and the collection of information used by public health workers, laboratory workers and epidemiologists.[179]

One component of CIPHS is the Public Health Information System (i-PHIS). i-PHIS is designed to be an automated, integrated client health record and reporting system that will support public health provider interventions, tracking, follow-up, case management and reporting. i-PHIS includes case management and surveillance components and is designed to be used centrally, providing secure access to one record by multiple public health providers and programs and allowing communicable disease surveillance and immunization information to be shared. It has been designed to be used by all levels of government and public health authorities. Ontario is in the process of implementing i-PHIS which is expected to be complete by the fall 2004.[180] It is important for Ontario to complete the implementation of i-PHIS as planned.

In addition to the programs outlined, Health Canada has many other programs and initiatives to address health surveillance.[181] In May 2004, the federal government announced the creation of the new Public Health Agency of Canada and the International Centre for Infectious Diseases together with a plan to strengthen the country's public health system. Included in the announcement was a promise of $100 million of funding for improved surveillance systems and other significant funding for public health.[182] It is important for the Province of Ontario to take advantage of opportunities which may arise from these new federal initiatives and to ensure that Ontario coordinates its surveillance activities with the federal programs.

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[178] *Expert Advisory Panel Report*, *supra* note 1, p.65; Health Canada, Centre for Surveillance Coordination, *Canadian Integrated Public Health Surveillance*, available from http://www.hc-sc.gc.ca/pphb-dgspsp/csc-ccs/ciphs_e.html [accessed 15 June 2004].

[179] *Ibid.* p.2.

[180] MOHLTC, *Public Health Renewal in Ontario, Backgrounder*, available from http://ogov.newswire.ca/ontario/GPOE/2004/04/20/c3159.html?lmatch=&lang=_e.html [accessed 15 June 2004].

[181] These programs are under the direction of the Population Public Health Branch (PPHB), Division of Disease Surveillance Centre for Infectious Disease Prevention and Control (See http://www.hc-sc.gc.ca/pph) and are undertaken through the Centre for Surveillance Coordination and the Network for Health Surveillance in Canada. See http://www.hc-sc.gc.ca/pphb-dgspsp/csc-ccs/network_e.html.

Canada also participates in an early warning system for outbreaks of foodborne disease called PulseNet. PulseNet is a national network of U.S. and Canadian public health laboratories that performs DNA fingerprinting on bacteria that may be foodborne. This network identifies and labels each fingerprint pattern and permits rapid comparison through an electronic database at the CDC to identify the strain and to make epidemiological linkages to other reported outbreaks. PulseNet Canada is the Canadian network which is coordinated by the National Microbiological Laboratory (Health Canada) in Winnipeg and is linked to most federal and provincial laboratories including the Ontario Public Health Laboratory.[183]

In Ontario, the MOHLTC and the Boards of Health are responsible to assess the level of foodborne illness. In order to do so, they should be identifying, measuring and tracking illnesses, analyzing the information for trends, responding to outbreaks, investigating potential hazards and outbreaks, and attempting to design their programs and services to prevent foodborne illnesses based on this information.

The *HPPA* requires all practitioners under the *Regulated Health Professions Act, 1991*[184] as well as hospital administrators, superintendents of institutions, school principals and laboratories to notify the local medical officer of health where a person has or may have a reportable disease. Reportable diseases are defined in the *Specification of Reportable Diseases* regulation and include illnesses caused by common foodborne pathogens such as *Campylobacter, Salmonella* and *E. coli* and all food poisonings.[185]

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[182] Health Canada, News Release, *Government of Canada announces details of new Public Health Agency of Canada and appoints Acting Chief Public Health Officer* (17 May 2004), available from http://www.hc-sc.gc.ca/english/pha/releases/2004_26.html [accessed 18 June 2004].

[183] *Expert Advisory Panel Report*, *supra* note 1, p. 65-66; U.S., CDC, *What is PulseNet?*, available from http://www.cdc.gov/pulsenet/what_is.htm [accessed 16 June 2004].

[184] *Regulated Health Professions Act, 1991*, S.O. 1991, c. 18.

As noted earlier, surveillance of foodborne illness based on reported cases has inherent weakness due to significant non-reporting or reporting errors. However, compounding the problem in Ontario is the lack of a reliable provincial reportable disease information system. At the present time, all Boards of Health are required to report all confirmed cases of reportable communicable disease to the Public Health Division of the MOHLTC. The current health surveillance software used by the MOHLTC and Boards of Health is the Reportable Disease Information System (RDIS) which was developed in the 1980s and is out of date. There are serious operational deficiencies in RDIS to the extent that all time critical surveillance reports of communicable diseases must be provided to the MOHLTC by telephone, e-mails, letters or faxes.[186]

In 2003, the provincial auditor concluded that the RDIS contained data that was not current, changes to the data were not monitored and information such as laboratory slips and school lists, were not being entered by the health units. In short, Ontario does not have an effective system to manage health surveillance data. However, it should be noted that despite the identified weakness of the RDIS, the MOHLTC has attempted to measure the extent of enteric foodborne disease since at least 1997.[187]

In the *Interim Report of the SARS Commission* and the *Final Report of the Expert Panel on SARS*, recommendations were recently made to improve and update the software system to ensure that a software program that is efficient and capable of handling foodborne illness data is in place and used by all public health agencies in Ontario to ensure the timely and complete entry and access to data.[188] I would add my support to those recommendations. Foodborne illness outbreaks can occur at any time and spread rapidly. Without a timely, accessible and universal system across Ontario, future outbreaks could be more severe than those already encountered and have catastrophic impacts on public health and the economy.

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[185] O. Reg. 559/91, s. 1.

[186] *Expert Advisory Panel Report, supra* note 1, p. 64.

[187] J. Lim & D. Middleton, MOHLTC, *Enteric Outbreaks Reported in Ontario, 2000-2002, supra* note 32; M. Lee, MOHLTC, *Enteric Illness in Ontario, Canada, from 1997 to 2001*, Public Health and Epidemiology Report Ontario (Vol. 14, No. 10, 30 November 2003).

[188] Ontario, *The SARS Commission Interim Report: SARS and Public Health in Ontario* (15 April 2004), principles 3,5 and 20; Ontario, *For the Public's Health: A Plan of Action, Final*

3.17.5 Emergency Preparedness

Traceability, biosecurity and surveillance systems are all to a certain extent interrelated. The strength or weakness of one of these systems may very well impact the effectiveness of another. Two important aspects of public health that are very much dependent on their effectiveness are food safety investigations, outbreaks and responses, and emergency preparedness. Food safety investigations, outbreaks and responses will be reviewed in Chapter 9.

Emergency preparedness refers to the need for the food safety system in Ontario to be able to rapidly identify the presence of a threat introduced accidentally or purposefully.[189]

Because surveillance is an important component of emergency preparedness, there is a need to ensure that there are linkages between the various food safety surveillance systems undertaken by various levels of government and industry. As outlined earlier, many of these government surveillance systems remain antiquated, under-funded and unable to cross communicate in a real-time fashion.

Under the *Emergency Preparedness Act*,[190] the CFIA's mandate is to prepare for and respond to emergencies involving food safety, animal health or any other situation related to the agency's programs.[191] Recently, the federal government announced the creation of a new portfolio, Public Safety and Emergency Preparedness, which includes emergency preparedness, crisis management and national security amongst its functions.

Report of the Ontario Expert Panel on SARS and Infectious Disease Control (April 2004), [also known as the "Walker Panel" or "Walker Report"], recommendations 82,83 and 84.

[189] *Expert Advisory Panel Report*, *supra* note 1, p. 122.

[190] *Emergency Preparedness Act*, R.S.C. 1985, c. 6 (4th Supp.).

[191] CFIA, *Corporate Business Plan 2003-2008*, *supra* note 153, p. 28.

In Ontario, emergency preparedness has been addressed, in part, by the creation of the Office of the Commissioner of Emergency Management and the adoption of the Ontario *Emergency Management Act*[192] which has established emergency preparedness standards to be implemented by all municipalities.

Since 2001, the U.S. has significantly increased its emergency preparedness capability. Surveillance systems have been enhanced by the creation of the Food Emergency Response Network (FERN) and the expansion of the Electronic Laboratory Exchange Network (eLEXNET) system. FERN is a network of U.S. federal and state laboratories that are partnered with other U.S. government authorities who are committed to analyze food samples in the event of a biological, chemical or radiological attack.[193] eLEXNET is an integrated web-based information network that allows health officials in the U.S. and multiple government agencies that engage in food safety activities to compare, share and coordinate laboratory analysis findings. It provides the necessary infrastructure for an early warning system that identifies potentially hazardous foods and enables health authorities to assess risks and analyze trends.[194]

In Ontario and across Canada, there is a need to implement these types of emergency preparedness strategies with a seamless and coordinated approach. The Expert Advisory Panel has made a number of recommendations to address these weaknesses in our current surveillance systems including:

- establishing an Ontario Food Safety Reporting Centre (OFSRC). This centre would be responsible for coordinating all matters relating to food safety reporting in the province. The OFSRC would report to the Chief Medical Officer of Health (CMOH) for the province of Ontario. All Ministries in the province that have responsibilities in food safety (OMAF, MOHLTC and MNR) would be required to report any data, issues and concerns to the OFSRC. The OFSRC would be equipped with the technology and resources to provide real-time reporting from multiple jurisdictions and analytical and GIS mapping capability. This centre would provide early warning and coordination to ensure rapid investigation of threats and unusual occurrences in Ontario, risk communication with the public and provide linkages to federal authorities.

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[192] *Emergency Management Act*, R.S.O. 1990, c. E.9.

[193] U.S. Food and Drug Administration, *Ensuring the Safety and Security of the Nation's Food Supply: Progress Report to Secretary Tommy G. Thompson* (23 July 2003), available from http://www.cfsan.fda.gov/~dms/fssrep.html [accessed 10 June 2004]; and *Statement of Lester M. Crawford, D.V.M., Ph.D., Deputy Commissioner, Food and Drug Administration* (19 November 2003), available from http://www.fda.gov/ola/2003/counterterrorism1119.html [accessed 10 June 2004].

[194] See http://www.elexnet.com

- implementing electronic submission and reporting forms for the food safety investigation samples submitted by public health inspectors that would be comparable to the electronic system currently in use by the meat inspection program.
- implementing the eLEXNET system (or a comparable system) in all federal, provincial and private food laboratories in Ontario. This type of system can extract and integrate data from differing reporting systems.
- carrying out a review to determine whether the capacity of the current level 3 containment facilities is adequate to support investigations into emerging pathogens and other sources of foodborne illness and funding the necessary enhancement.
- expanding the province's capacity to conduct testing and research on the causes of foodborne illnesses and on prion related zoonotic diseases such as BSE.[195]

For the reasons set out by the Expert Advisory Panel, I believe these recommendations are sound and if implemented would improve food safety in Ontario.

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[195] *Expert Advisory Panel Report*, *supra* note 1, p. 123-124.

3.17.6 Conclusions and Recommendations

In summarizing its review of Ontario's provincial surveillance system, the Expert Advisory Panel states:

> *High-quality surveillance is critical in order to identify foodborne disease trends and emerging problems, identify and minimize the impact of outbreaks, prevent spread to larger populations, and to plan and evaluate food safety programs (e.g. HACCP, inspector and food handler training programs). In addition to surveillance of foodborne diseases, there is continued need for surveillance of hazards throughout the food chain through ongoing monitoring, as well as periodic baseline or targeted studies. These data should support risk analysis and be used to develop food safety criteria. The current foodborne disease surveillance system is fragmented and relies on outdated methodologies. There is need for improved foodborne disease reporting, more resources for timely data analysis, interpretation and dissemination to those that need to know (e.g. enhanced computer systems, new technologies, more epidemiological expertise), and for better coordination among responsible officials at the provincial level, and among provincial and federal partners in foodborne disease control.*[196]

I agree with these comments. The goal of the Ontario food safety system must be to protect human health. The protection of human health is the core responsibility of the public health system in Ontario and at the head of that system, the CMOH. Later in this report I will outline my recommendation for a CVO whose responsibilities will include overseeing animal health and foodborne hazards surveillance in abattoirs and free standing meat processors. The CMOH should work closely with the CVO to ensure that all provincial surveillance systems for animal health, foodborne hazards and foodborne illness are properly integrated and coordinated to ensure that there is a timely exchange of information and analysis and that the system can supply data to support and evaluate HACCP-based programs and risk-based resource allocation. The food safety system must be informed by its risks. The risks cannot be known unless there is a strong surveillance system with communication and coordination of the surveillance data amongst the parties involved in food safety.

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[196] *Ibid.*, p. 142-143.

I recommend that the provincial government undertake a review to ensure that Ontario has effective surveillance strategies and programs for animal health, food hazards and foodborne illnesses in a system that is integrated, transparent, properly resourced and coordinated with national surveillance programs.

I recommend that the Ministry of Health and Long-Term Care expedite the implementation of a system such as the Integrated Public Health Information System (iPHIS), to track all foodborne illnesses across the province and permit access and analysis of the data, by all Boards of Health in the province.

I recommend that the provincial government establish an Ontario Food Safety Reporting Centre to be responsible for the coordination of all matters relating to food safety in the province.

I recommend that the provincial government implement a system such as the Electronic Laboratory Exchange Network (eLEXNET) system in provincial and private food laboratories in Ontario to permit the extraction and integration of data from different reporting systems.

I recommend that the provincial government undertake a review to ensure that Ontario has level three containment facilities that are capable of supporting investigations into emerging pathogens and other foodborne illnesses.

I recommend that the Ministry of Health and Long-Term Care develop a standard food safety testing policy and procedure for the Boards of Health which should form part of the Mandatory Health Programs and Services Guidelines.

I recommend that the provincial government review its capacity to conduct testing and research of the causes of foodborne illnesses and or prion related zoonotic diseases such as bovine spongiform

encephalopathy (BSE) and expand its capacity as necessary based on the outcome of that review.

The MOHLTC should provide laboratory support for this testing, and ensure that the results of the tests are analyzed and used in the planning, development and revision of programs and services regarding meat safety and a reduction of foodborne illness.

I recommend that the Ministry of Health and Long-Term Care develop and implement a system of electronic submission and reporting forms for the food safety investigation samples submitted by public health inspectors.

The system should be comparable to the electronic submission system currently in place for the meat inspectorate of OMAF's Food Inspection Division.

3.18 Microbiological Standards for Meat

Science enables standards to be developed which can be used to improve the safety of the food that we consume. Microbiological testing is an important scientific tool used to determine these standards. While microbiological testing of finished products for pathogens will assess the safety of finished products, it is limited in its effectiveness.[197] The primary benefits of testing relate to surveillance, HACCP verification and validation, and re-validation of control procedures. In order to make microbiological testing useful, it is important that microbiological criterion and performance standards be determined.

Microbiological criteria and standards for food define the acceptability of a specific food by setting the limits for the presence or number of specific micro-organisms, or quantity of their toxins, per unit of mass, volume or area.[198] The standard should describe the food to which it applies, the level of the food chain where it applies and any actions to be taken when the standard is not met.[199] Governments in both the U.S. and U.K. have established advisory committees to provide advice on microbiological safety issues including the development of microbiological criterion and standards.[200] The Province of Ontario does not have a similar advisory committee.

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[197] Codex Alimentarius Commission, *Principles for the Establishment and Application of Microbiological Criteria for Foods*, CAC/GL-21 (1997), p. 1 & 2.
[198] *Ibid.*, p. 2.

In the U.S., the establishment of microbiological performance standards began with a pathogen reduction program and the Final Rule. FSIS has completed baseline studies that are used to determine performance standards and measure performance.[201]

At the federal level, both Health Canada and the CFIA are developing performance standards for meat and poultry based on results of risk assessments and the level of contamination of the carcass.[202] Health Canada's Food Directorate is responsible for establishing policies, setting standards and providing advice and information on the safety and nutritional values of food including policies and standards related to chemical and microbiological contaminants of foods.

OMAF has completed a number of baseline studies of microbiological contamination in raw beef, pork and chicken and also chemical contamination due to veterinarian drug residues in raw meats in provincially inspected plants. Baseline studies have also been completed for some fish species. OMAF is planning to undertake additional studies related to the microbiological quality of ready-to-eat meats and environmental chemical residues. Baseline studies provide important data that can be used to:

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[199] *Ibid.*, p. 2; Health Canada, *Food Program Guideline Concerning Microbiological Criteria* (April 1998), p. 5, available from http://www.hc-sc.gc.ca/food-aliment/mh-dm/mhe-dme/compendium/volume_1/pdf/e_guidance.pdf [accessed 6 June 2004].

[200] In the U.S., the national Advisory Committee on Microbiological Criteria for Foodswas established in 1988 and is co-sponsored by a number of organizations including FSIS, FDA and CDC. In the U.K., the Advisory Committee on Microbiological Safety of Food (ACMSF) was formed in 1990 as a statutory committee to provide independent expert advice to the government on questions relating to microbes in food. It provides advice to the government and the Food Standards Agency on questions relating to microbes in food.

[201] Under FSIS, the Office of Public Health Science collects, analyzes and report scientific information related to meat, poultry and egg products from farm to table and uses the information. See P. Johnson et al., OMAF, *Overview of Microbiological Baseline Studies of Raw Pork, Beef and Chicken Carcasses in Ontario Abattoirs* (2003), available from http://www.aic.ca/aicf/conference/Pat_Johnson.pdf [accessed 6 June 2004].

[202] Health Canada, Food Directorate, *First Annual Report on Program Priorities & Achievements, 2003-2004*, *supra* note 20; CFIA, *2002-2003 Annual Report*, available from http://www.inspection.gc.ca/english/corpaffr/ar/ar03/ar03e.shtml [accessed 9 June 2004].

- assess the level of food safety risk;
- develop performance standards for meat coming from provincially inspected plants;
- measure the impact of regulatory and non-regulatory programs post-implementation;
- target and prioritize resources ;
- examine operational variables in plants across Ontario, eg. plant practices, processing rates; and
- undertake performance comparison between provincially inspected plants and federally inspected plants and with other jurisdictions.[203]

Some of the results of OMAF's baseline studies are set out in the tables below:

Table - Prevalence of Pathogens on Pork Carcasses from Provincially Inspected Abattoirs in Ontario[204]

Organism	All samples		BBQ Hogs		Market Hogs	
	No. of samples	% +ve	Nov. of samples	% +ve	No. of samples	% +ve
E. coli[a]	**1557**	**39.5**	**168**	**49.4**	**1389**	**38.3**
Verotoxigenic E. coli	**1556**	**2.1**	**168**	**1.2**	**1388**	**2.2**
Salmonella	**1540**	**4.8**	**168**	**17.5**	**1374**	**3.3**
Campylobacter jejuni/coli	**1556**	**26.7**	**168**	**33.3**	**1388**	**25.9**
Listeria monocytogenes	**1556**	**10.7**	**168**	**4.8**	**1388**	**11.4**

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[203] See the following studies from the OMAF: *Microbiological Baseline Survey of Raw Beef Carcasses in Ontario Abattoirs* (2001); *OMAF & CFIA Chemical Residue Monitoring Program, Comparison of Chickens* (undated); *Baseline Risk Study of Chemical Contaminants in Raw Meats Processed in Ontario's Provincially Licensed Plants* (April 2002); *Microbiological Analysis of Raw Chicken Carcasses in Ontario Abattoirs* (June 2003); *Microbiological Analysis of Raw Pork Carcasses in Ontario Abattoirs* (January 2003); and *Microbiological Baseline Study for Ready-to-Eat Meats, Draft* (July 2002).

[204] P. Johnson et al., OMAF, *Overview of Microbiological Baseline Studies of Raw Pork, Beef and Chicken Carcasses in Ontario Abattoirs*, *supra* note 201.

Table - Prevalence of Pathogens on Beef Carcasses from Provincially Inspected Abattoirs in Ontario[205]

Organism	All samples		Culled Beef		Fed Beef	
	No. of samples	% +ve	No. of samples	% +ve	No. of samples	% +ve
E. coli	1557	18.6	189	24.9	1239	17.9
Verotoxigenic E. coli	1556	0.3	189	0	1238	0.3
Salmonella	1540	1.6	189	4.2	1239	1.3
Campylobacter jejuni/coli	1556	1.5	186	4.3	1227	1.2
Listeria monocytogenes	1556	9.9	189	7.9	1239	10.2

Table - Prevalence of Pathogens on Chicken Carcasses from Provincially Inspected Abattoirs in Ontario[206]

Organism	All samples	
	No. of Samples	% +ve
E. coli	1480	99.0
Verotoxigenic E. coli	1468	0
Salmonella	1480	31.6
Campylobacter jejuni/coli	1469	63.9
Listeria monocytogenes	1469	30.0

The studies completed to date have already provided some interesting results. For example, the baseline study on market hogs showed that incidences of *Campylobacter* and *Salmonella* on carcasses processed at provincially licensed plants were at lower levels than those processed in federally registered plants in the U.K. and the U.S. The study also showed that the carcass quality from small plants was as high and in some cases higher than carcasses processed at larger plants. Results from the microbiological analysis of raw chicken carcasses demonstrated that small plants had significantly lower incidences of *Listeria* and *Salmonella* and lower *E. coli* counts than larger plants, but significantly higher incidences of *Campylobacter*. The study also demonstrated that there were differences in the pathogen findings depending on the season and geography. Manual evisceration resulted in significantly lower incidences of *E. coli* and *Salmonella*, but significantly higher incidences of *Campylobacter*. This may explain the difference in the results between larger and smaller plants, since smaller plants tend to use manual evisceration methods.[207]

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[205] *Ibid.*

[206] *Ibid.*

Microbiological testing and the development of microbiological performance standards are mandatory and important aspects of both the NMPRC standards as well as any HACCP-based food safety program. Baseline testing in Ontario is important and should continue.

Both the NMPRC standards and HACCP will require an operator to undertake routine testing to demonstrate that their meat satisfies or exceeds these microbiological performance standards. Compliance will be determined by appropriate government verification, auditing and inspection. The expected result will be safer meat.

I recommend that the Ministry of Agriculture and Food complete all baseline studies currently being undertaken and those which are planned. I recommend that the provincial government, at the earliest opportunity, establish mandatory microbiological performance standards and that these standards be enacted by way of regulation and communicated to the industry. Following a reasonable period to enable the operators to achieve compliance, the province should undertake appropriate inspection and auditing to ensure that these standards are being met.

The development of microbiological performance standards and criteria for Ontario should not be done in a vacuum. It would be preferable if these standards were established in conjunction with national standards and a national strategy on microbiological criteria. **I recommend that the provincial government continue its work with the federal government and other provincial governments to establish a national strategy on microbiological food safety and national microbiological performance standards.**

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[207] OMAF, *Microbiological Analysis of Raw Chicken Carcasses in Ontario Abattoirs*, *supra* note 203.

In order to ensure that the province has the benefit of the best scientific advice on the issues related to microbiological food safety, **I recommend that the provincial government in cooperation with the federal government and other provincial governments, establish an advisory committee which should be mandated to provide expert advice on questions relating to the microbiological safety of food.**

3.19 Science Capacity in Ontario

The importance of good science in the development of a food safety program cannot be underestimated. The Expert Advisory Panel in its report noted:

> *Food safety systems must be firmly based on sound science for the efficient and effective management of food safety problems, protection of public health and maintenance of consumer and business confidence. These systems should adhere to good risk analysis principles, and should have adequate scientific expertise and laboratory capacity to support policy development and programs. The current inspection regimes are solidly based in risk analysis and have been aggressively and appropriately using research, baseline studies and risk assessments to support the meat inspection, HACCP, and other programs that are intended to improve food safety. It is critical to maintain a high-quality food safety science capacity in Ontario that is based on solid research, surveillance and risk analysis.*[208]

It is important for Ontario to maintain a high quality food safety science capacity.[209] I agree with the recommendation of the Expert Advisory Panel. The proclamation of the *FSQA*, enactment of meat inspection regulations equivalent to the NMPRC standards and mandatory HACCP will all require a strong science and laboratory capacity to provide the necessary scientific foundation for the safety of meat in this province. For that reason, **I recommend that the provincial government provide necessary direction and resources to ensure that it has a high quality food safety science and laboratory capacity to provide research, surveillance and risk analysis.**

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[208] *Expert Advisory Panel Report, supra* note 1, p. 202.

[209] *Ibid.*, p. 205.

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Chapter 4 - Farm Livestock Production

4.1 Overview of Meat Safety Issues on Farms

The farm to fork continuum begins at the farm. Animals processed in provincially licensed abattoirs and meat processing plants in Ontario are primarily raised on Ontario livestock farms. Livestock produced in Ontario includes beef, dairy, sheep, hogs, poultry and goats, as well as domestic bison, deer, elk and other specialty animals. Foodborne contaminants cannot be inspected out at slaughter or at any other single point in food production or processing, and for that reason quality and safety must be built into the process from the beginning. It is easier to keep safe an already safe product.

For the most part, farmers' production methods are designed to raise and sell healthy animals, but there are a number of food hazards that can arise at farms. The main hazards on-farm are animal diseases or pathogens that may be transmitted to humans through the meat produced from an infected animal. Other risks relate to production practices that may leave residues of drugs, hormones or other chemicals, or physical elements, such as broken needles or splinters, in animals that could cause harm to the consumer. Also, direct sales of farm products from farmers to consumers give rise to the same risks that exist in any other food premises.

At present, there is very little in the way of legislation or regulation directed to the protection of food safety at the farm stage of the continuum. Farms are not generally licensed, nor is there a mandatory broad-based inspection program concerning on-farm food safety. Although there are reporting requirements for certain diseases, regulations governing animal transport, and restrictions on feeding certain products or using certain medications, the system is not well-designed to enforce these requirements and primarily relies on voluntary compliance.

Nevertheless, Ontario does have a high standard of food safety from food animals, largely because of the proactive work undertaken by Ontario farmers, their commodity groups, veterinarians, the Ministry of Agriculture and Food (OMAF), the Canadian Food Inspection Agency (CFIA) and the University of Guelph. On-farm food safety programs, environmental farm plans and livestock medicines education programs have all contributed to a safer meat supply in Ontario, but I believe the system can be strengthened further.

In making recommendations concerning meat safety at the farm level of the food continuum, I am seeking a balance between a number of desires emphasized by stakeholders. The first is a desire that programs be voluntary and industry driven. The second is a desire for a consistent, level playing field with minimum food safety requirements based on harmonized inspection and production standards across jurisdictions. This is of particular interest to larger Ontario livestock farmers who seek enhanced access to markets. The third is a desire of smaller farmers who express concern about a regulatory system that may require an expensive or prohibitive amount of paperwork and may infringe on their ability to meet local market or niche demands. The fourth is a desire to ensure that Ontario farmers are able to fulfill their role in a growing national and international framework of disease surveillance to deal with emerging diseases and more virulent pathogens. The last is a desire to balance the historic practice of farm families slaughtering and eating their own animals with a growing public health and animal welfare concern about illegal slaughter and the sale of uninspected meat.

While I am encouraged by the direction of many recent initiatives and future plans, there are compelling reasons for meat safety, to require that all farms adhere to certain standards and not rely on a voluntary approach. Those who choose not to participate are likely those who represent the greater risk. For the food safety system to provide the best protection, there must be full participation. The industry itself has recognized this with recent initiatives, such as the mandatory tagging of cattle and sheep. The provincial government is also now requiring that all farms in Ontario develop nutrient management plans. The development of mandatory approaches will require meaningful participation and leadership by stakeholders and a supportive regulatory framework to provide adequate training and enforcement. I believe it will be possible to address many of the on-farm food safety issues discussed in this chapter through a comprehensive on-farm food safety framework administered by OMAF. Earlier in this report, I recommended that mandatory HACCP-based food safety programs be required across all sectors of the food continuum. The framework I am proposing will carry out this recommendation at the farm level.

I recommend that the Ministry of Agriculture and Food support the development of an on-farm food safety framework, as well as training and support measures to ensure that all livestock farms have the capacity to develop and implement an on-farm food safety plan.

4.2 Farming in Ontario

4.2.1 Economic Significance

Rural-based agricultural businesses are a major contributor to the provincial annual gross domestic output. In 2001-2002, Ontario's food industry produced over $8.5 billion worth of agricultural production. Exported agricultural products totaled $7.83 billion. Agri-food is Ontario's second largest manufacturing sector, generating more than $31 billion in economic activity in 2001 and employing more than 650,000 people.[1]

The vast majority (over 98%) of Canadian farms are family owned and operated. In Ontario, farms are becoming fewer, but larger. About 30,000 of Ontario's 60,000 farms are livestock producers.[2] On average, each Canadian spends $1,650 a year on food. Of that, $110 goes to the farmer.[3] For every dollar in revenue, it costs beef producers 94 cents in expenses and dairy farms 75 cents in expenses.[4]

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[1] OMAF, *Business Plan 2002-2003*, available from http://www.gov.on.ca/OMAFRA/english/about/BusPlan2003/message.html [accessed 27 February 2004].

[2] In 2001, Ontario had 59,728 farms, down 11% from 67,520 in 1996. Statistics Canada, 2001 *Census of Agriculture, Total area of farms, land tenure and land in crops, provinces*, available from http://www.statcan.ca/english/Pgdb/econ124g.htm [accessed 2 June 2004].

[3] Ontario Farm Animal Council, http://www.ofac.org/who.html [accessed 26 April 2004].

[4] Statistics Canada, 2001 *Census of Agriculture*. *The Daily – May 15, 2002*, available from http://www.statcan.ca/Daily/English/020515/d020515a.htm [accessed 2 June 2004].

4.2.2 Legislative Scheme

4.2.2.1 Defining a Farm

Farm businesses that declare gross farm income of $7,000 or more[5] are required to register annually under the *Farm Registration and Farm Organizations Funding Act, 1993*.[6] Agricorp[7] reported that 48,000 farms in Ontario registered under this requirement by June 4, 2002. The number of Ontario farms in the 2001 Census of Agriculture with less than $7,000 in gross farm receipts was 10,383.[8]

4.2.2.2 Production and Marketing of Animals

Both provincial and federal legislation applies to the production and marketing of livestock. Some legislation is discussed elsewhere in the Report, notably, the *Meat Inspection Act (Ontario), Livestock Community Sales Act, Dead Animal Disposal Act, Livestock and Livestock Products Act* and the as yet unproclaimed *Food Safety and Quality Act, 2001 (FSQA)*.

A number of aspects of sales and marketing within Ontario are regulated by provincial legislation. The *Farm Products Grades and Sales Act* provides for standard grade names for carcasses and labelling requirements.[9] Grades relate to quality, not safety. The *Farm Products Marketing Act* establishes the Ontario Farm Products Marketing Commission, which may establish local boards and appoint inspectors.[10] Some local marketing boards have the power to license persons engaged in producing their commodity and the authority to establish quota systems (eg. poultry). Somewhat similar marketing legislation is in place for beef and dairy cattle.[11]

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[5] "Farming" is defined in s.248 (1) of the *Income Tax Act* (Canada) to include: tillage of the soil, livestock raising or exhibiting, raising of poultry, dairy farming, … but does not include employment under a person engaged in the business of farming." *Farm Registration and Farm Organizations Funding Act 1993*, S.O. 1993, c.21, O. Reg. 723/93, s.1 sets the amount of $7,000. See G.H. Munro and K. Oelschlagel, *Taxation of Farmers and Fishermen*, (Carswell, March 2000) for taxation of farming and other activities deemed not to be farming, even though they may take place on a farm.

[6] The registration fee of $150 (plus GST) is forwarded to a General Farm Organization accredited under the Act: Christian Farmers Federation of Ontario, Ontario Federation of Agriculture and the National Farmers Union – Ontario.

[7] Agricorp is the provincial crown corporation responsible for administering the Farm Business Registration Program. www.agricorp.com [accessed 26 April 2004].

[8] Information provided to the Review by OMAF, May 6, 2004.

[9] Specific regulations exist for beef, hogs, lamb and mutton, veal and poultry carcasses. See *Farm Products Grades and Sales Act*, R.S.O. 1990, c.F.8, O. Reg. 685/94, R.R.O 1990, Reg. 379, R.R.O. 1990, Reg. 380, R.R.O. 1990, Reg. 382, R.R.O. 1990, Reg. 381.

[10] E.g. Ontario Broiler Hatching Egg and Chick Commission, Chicken Farmers of Ontario, Ontario Egg Producers, Ontario Pork Producers' Marketing Board, Ontario Sheep Marketing Agency, and Ontario Turkey Producers' Marketing Board. *Farm Products Marketing Act*, R.S.O. 1990, c.F.9, R.R.O. 1990, Reg. 396, R.R.O. 1990, Reg. 402, R.R.O. 1990, Reg. 407, R.R.O. 1990, Reg. 419, R.R.O. 1990, Reg. 429, R.R.O. 1990, Reg. 437.

Environmental issues related to farming are dealt with under the *Nutrient Management Act, 2002*, which provides for a framework for proper storage and application of manure on farmland, as well as disposal of farm waste, including deadstock.[12] The *Pesticides Act* deals with the sale and use of pesticides, as well as situations where animals may come in contact with pesticides.[13] The *Livestock Medicines Act*[14] and the *Veterinarians Act*[15] address the sale and use of livestock medicines. The *Health Protection and Promotion Act* can be used to quarantine a farm when a potential health hazard is identified.[16]

Animal welfare and the prevention of cruelty to animals, including farm animals, is regulated by certain provincial legislation referred to above, the *Ontario Society for the Prevention of Cruelty to Animals Act*[17] and by federal legislation.[18]

4.2.3 Farm Organizations and Livestock Commodity Groups

Livestock farmers are members of a wide range of general farm organizations and specific commodity groups[19] that represent their interests to government and the public and also provide education, training and other services to their membership. In most cases, membership is voluntary, but where marketing boards have been established by statute, they may license their members, charge check-off fees on animals produced, or establish other mechanisms for mandatory adherence to specified requirements.

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[11] *Beef Cattle Marketing Act*, R.S.O. 1990, c.B.5; *Milk Act*, R.S.O. 1990, c.M.12.
[12] *Nutrient Management Act, 2002*, S.O. 2002, c.4.
[13] *Pesticides Act*, R.S.O. 1990, c.P.11.
[14] *Livestock Medicines Act*, R.S.O. 1990, c.L.23.
[15] *Veterinarians Act*, R.S.O. 1990, c.V.3.
[16] *Health Protection and Promotion Act*, R.S.O. 1990, c.H.7, s.13 (1).
[17] *Ontario Society for the Prevention of Cruelty to Animals Act*, R.S.O. 1990, c.O.36.
[18] *Health of Animals Act*, S.C. 1990, c.21, with its regulations on animal transport and the *Criminal Code of Canada*, R.S.C. 1985, c.46, s.446.
[19] Commodity organizations are livestock producer organizations for particular animals, such as beef or chickens or specific breeds.

Two general farm organizations that deal with livestock producers and food safety issues are the Canadian Federation of Agriculture (CFA) and the Ontario Farm Animal Council (OFAC). The CFA provides Canada's farmers with a single national voice. Its members include provincial general farm organizations, such as the Ontario Farmers Association, as well as national and interprovincial commodity organizations from every province. It coordinates the Canadian On-Farm Food Safety (COFFS) program. The OFAC supports and promotes the responsible production and marketing of livestock and poultry by Ontario farmers and informs the public about animal agriculture.[20]

There are a number of other general farm organizations[21] as well as numerous commodity groups at the national and provincial level representing every domestic animal, many of whom have initiated their own on-farm food safety programs or quality assurance programs. Other groups concerned with production of livestock include Farmers' Market Ontario, animal welfare groups, academic institutions and agricultural professional organizations.

Many of these groups have been involved in consultations with the provincial government around the development of the *FSQA*[22] and some provided submissions to this Review. The commodity groups are an important bridge to producers and the provincial government will need to be vigilant in continuing to update, consult and engage all of these stakeholders groups, as it continues to strengthen the food safety system in Ontario.

4.2.4 Livestock Raised and Slaughtered in Ontario

The *Farmed Animal Statistics* table in Appendix D to the Report provides a listing of the numbers of animals produced in Ontario and the number of animals slaughtered in provincially and federally licensed facilities.

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[20] OFAC produces on-farm food safety and animal welfare resources for farmers and the public, available from http://www.ofac.org/who.html, [accessed 14 April 2004]. Another organization providing public education is Ontario Agri-Food Education Inc. (OAFE); their work is described in the chapter on Consumers.

[21] See note 6. There are also a number of organizations representing farm women, francophone farmers, youth (eg. 4H), ecological and organic farmers, and others.

[22] OMAF, *Ontario Food Safety System and Quality Review: A Report on the Consultation*, (May 2001). OMAF, *Meat and Poultry Regulations Consultation – A Review of the Meat Inspection System and Regulations*, (August 2001).

Animals produced in Ontario may also be exported live for breeding or slaughter elsewhere and some animals slaughtered in provincial abattoirs have been imported as live animals into Ontario.

4.3 HACCP-Based On-Farm Food Safety Programs

4.3.1 Introduction

Chapter 3 in this Report, A Science-Based Approach to Food Safety, describes the requirements of HACCP programs. At the farm level, these are typically called "on-farm food safety (OFFS) programs."[23]

Throughout this chapter, I will refer to HACCP-based programs to describe programs that follow many, but not all, of the HACCP principles, namely, identification of potential hazards, establishing points of control where good agriculture practices are applied in order to prevent these hazards, documentation, training, and verification. Well-defined prerequisite programs are also included. I recognize that few farms will be able to implement full HACCP plans with baseline studies, microbial and other testing at critical control points, as well as many other components required to meet international HACCP standards. Nevertheless, HACCP-based individual on-farm food safety plans that emphasize implementation of good practices to reduce and prevent food hazards from arising are achievable by all farms.

As noted above, a framework is needed to describe the system for the many components of HACCP programs that clearly outlines the roles and responsibilities of government, industry organizations and producers with respect to OFFS program development, recognition, implementation, training, auditing, inspection, testing, surveillance, prerequisite programs and how adherence to the system is to be enforced.

4.3.2 On-Farm Food Safety Risk Analysis

As noted in Chapter 3, the main meat safety hazards on-farm relate to what, in meat, may cause illness in humans. There are three types of hazards:

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[23] Some jurisdictions and groups call them quality assurance programs or pre-harvest food safety programs. See *infra* notes 94 and 97.

biological, chemical and physical. Most reported foodborne illness is caused by biological factors, so these factors are the focus of risk reduction across the whole continuum, including farms. However, because drugs and chemicals enter animals on farms, many current and past risk reduction efforts on-farm have focused on preventing residues. In assessing risk at the farm level, the link between animal health issues and foodborne illness is critical.[24] As a general statement, healthy, clean, well-nourished, stress-free animals produce higher quality and safe food products, so a number of interventions promote animal welfare practices to achieve these results. However, the scientific basis linking general animal welfare to food safety is not well established. The table in Appendix F illustrates risk analysis for different interventions across the food continuum, including farms.

4.3.3 The Canadian On-Farm Food Safety Program

Since 1997, the COFFS Program has developed a framework in which commodity groups at the national level can develop HACCP-based plans for farms that are consistent with Codex Alimentarius Commission's HACCP definitions and principles and CFIA's Food Safety Enhancement Program.[25] It is important to understand this framework in order to make recommendations for a provincial on-farm food safety program.

Most of the large commodity groups in Canada have been proactive in developing national, commodity-specific, HACCP-based programs, designed for recognition in Canada and acceptance in the international marketplace.[26] There are at least 19 commodity specific initiatives at varying stages of development.[27]

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[24] See discussion on risk analysis for *E. coli* and BSE. *Report of the Expert Advisory Panel, The Scientific and Regulatory Basis of Meat Inspection in Ontario* (May 2004), Chapter 8 [hereinafter *Expert Advisory Panel Report*].

[25] The program has provided coordination, funding support, technical advice and official recognition. *Canadian On-Farm Food Safety Program* (7 October 2003), available from http://www.agr.gc.ca/policy/adapt/national_initiatives/coffsp.phtml [accessed 26 February 2004]. See also the CFA website for newsletters and other materials, available from http://www.cfa-fca.ca/english/programs_and_projects/coffsnews/spring03.htm [accessed 29 March 2004].

The COFFS Program has four phases for each commodity: development of the national strategy; development of the on-farm food-safety program; implementation of the program; and recognition of the program. In June 2001, CFIA was identified to lead a process, with provincial and territorial participation, to provide government recognition for industry developed on-farm food safety programs.[28] The On-Farm Food Safety Recognition Program is a key program in support of the "Food Safety and Food Quality" element of the recent Agricultural Policy Framework (APF), which the CFIA has implemented in pursuit of its mandate.

There are four distinct components proposed for national recognition.[29] The commodity group must have a detailed management structure to define the roles and responsibilities of all participants in the program including: national and provincial producer organizations; provincial delivery agents; OFFS auditors (or validators); independent third-party auditors; and producers. The management structure must also include: a plan for producer/participant and employee training; descriptions of commodity-specific training materials; schedules for on-farm audits (or validations), program updates and maintenance.

Although a number of the commodity groups have produced extensive on-farm safety manuals for their members, established websites and hired resource persons,[30] and are all in the process of implementing their program with producers, none has completed all four phases and received final recognition by CFIA. A training program has recently been established for auditors for the national programs.[31]

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[26] A. Chambers, *Canadian Approach to On-Farm Food Safety – Taking Control Through Collaborative Action*. A powerpoint presentation to the CFA Conference: New Farm Management Systems: Taking Control, February 10-11, 2004, Ottawa, available from http://www.cfa-fca.ca/english/whats_new/mgtsysdocs/Albert_Chambers_Eng.pdf [accessed 26 April 2004].

[27] Livestock commodities include: broiler chickens, eggs, turkeys, hogs, bison, dairy, beef, veal, sheep, goats, deer and elk. *Supra* note 25.

[28] Decision of the annual federal, provincial and territorial agricultural minister's meeting in Whitehorse. See CFIA, *On-Farm Food Safety Recognition Program*, Food Safety Directorate Policy and Strategies, (11 March 2004), available from http://www.inspection.gc.ca/english/fssa/polstrat/reco/recoe.shtml [accessed 26 April 2004]

[29] The four steps are: Applying for Recognition; Pre-Recognition; Stage One Technical Review; Stage Two Implementation and Third Party Audit; Stage Three Pre-Recognition Assessment; Receiving Recognition; Post-Recognition Ongoing Monitoring and Assessment. See CFIA web page: *On-Farm Food Safety Recognition Program Process*, (18 October 2003), http://www.inspection.gc.ca/english/fssa/polstrat/reco/processe.shtml [accessed 26 April 2004].

4.3.4 The Need for an Ontario Strategy and Framework for OFFS

It may seem to some, that with the COFFS Program in place, there is no need for a provincial initiative. However, I believe that there are a number of benefits to OMAF developing its own on-farm food safety strategy, as well as a formal framework for provincial recognition of on-farm food safety programs, that is integrated with the national program.[32] The COFFS Program is effectively implemented at the provincial level by the provincial associations that represent the members of the particular national commodity group. Since implementation and delivery of the program to local farmers is essentially at the provincial level, I believe a provincial government framework will enhance a coordinated approach to ensure that all Ontario livestock farmers are aware of the OFFS programs. It will also encourage integration of existing provincial programs such as the Livestock Medicines Education Program (LMEP) as prerequisite programs, and help in developing training opportunities in key prerequisite areas that will achieve on-farm safety objectives. A provincial OFFS strategy could also integrate measures, such as traceability, disease surveillance, and biosecurity, which begin at the farm, but need to be reinforced throughout the food continuum.

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[30] See CFIA Food Safety Directorate, available from http://www.inspection.gc.ca/english/fssa/polstrat/reco/linke.shtml [accessed 26 April 2004]; Canadian Cattlemen's Association, *Quality Starts Here* http://www.cattle.ca/QSH/safety.htm; Canadian Pork Council, *Canadian Quality Assurance (CQA)®Program* http://www.cpc-ccp.com/QA.htm; Chicken Farmers of Canada, *Food Safety in the Chicken Barn* http://www.chicken.ca/E_food_safety.htm; Canadian Turkey Marketing Association, *Raising Turkeys, Producing Food* http://www.canadianturkey.ca/fsafety.htm; Canadian Sheep Federation, *Canadian Quality Sheep and Lamb Program* http://www.cansheep.ca/english/lamb_e.htm; Dairy Farmers of Canada, *Quality Assurance Program* http://www.dairyinfo.gc.ca/cdicofqm.htm; Animal Nutrition Association of Canada, Feed Safety Program http://www.anac-anac.ca/anglais/infoanac/1_pageshtml/menus/info_saf.html; Canadian Aquaculture Industry Alliance – Canadian Shellfish Quality Resource.

[31] Société Générale de Surveillance (SGS), a global independent training, audit and certification body, has been hired by CFA. Training will be to Codex/CFIA Curriculum Guidelines for HACCP training requirements and ISO 19011. See http://www.sgs.ca/serviceSolutions/haccp/onFarmAuditor-en.html [accessed 29 April 2004].

[32] An overall strategy describes initiatives and directions to carry out the department's vision, mission and goals. The framework describes the system, including roles and responsibilities.

Lastly, I am particularly concerned that many small mixed livestock farms will be left out, since they are often not members of national commodity groups and they may not easily fit into the national COFFS framework, which focuses on single species programs. An Ontario framework should include an on-farm food safety program designed for small mixed livestock operations.

4.3.5 The Ontario On-Farm Food Safety Strategy

The process of developing an On-Farm Food Safety Strategy began in Ontario in 2002, when OMAF released a stakeholder discussion paper[33] and undertook consultation with stakeholders, commodity groups and agri-food partners.[34] A steering committee and five working groups were established[35] and it is anticipated that their final report will be completed shortly. This is a very important initiative and it is my hope that OMAF will review and finalize a formal on-farm food safety strategy and framework for Ontario at the earliest opportunity.

The various working groups have made a number of recommendations to date to which I would add my support. One suggestion is that a provincial OFFS initiative be administered by a coalition of commodity groups, industry and governments.[36] It seems to me this approach, if properly supported, is a sensible one that would effectively focus the efforts of all interested partners on the common goal. It will be important to ensure that all stakeholders, including smaller mixed livestock farms, are represented.

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[33] OMAF, *On-Farm Food Safety Programs in Ontario Discussion Paper*, (March 2002), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/bacground.htm [accessed 10 March 2004]

[34] OMAF, *On-Farm Food Safety Strategy For Ontario*, 16 January 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/strategy.htm, [accessed 10 March 2004].

[35] *Supra* note 33. The groups include an OMAF staff person and stakeholder participants. Each group developed a vision, options, estimated resource requirements, priority actions and associated timelines, with a final report to the Steering Committee by May 2004.

[36] OMAF, OFFS Working Group 2 *Administration and Infrastructure Monthly Progress Report*, (5 April 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/prog_gr2.htm, [accessed 30 April 2004].

Another recommendation is to use a modular approach and staged implementation for the OFFS program, which meets "market demands, is flexible, is cost recoverable and sustainable."[37] The suggestion is to take the common elements of the various OFFS initiatives that have been developed for different commodities and put priority on developing prototypes for record keeping, education and training and audit checklists. I also support this recommendation, particularly where modules relating to good production practices and prerequisite programs can be put in place now and farmers can be reinforced to document these practices with easy-to-use tools that are not bureaucratic, cumbersome or expensive to administer.

There is also a recommendation for a science-based system to measure the effectiveness of Ontario OFFS initiatives over a five-year period. This would include establishing OFFS objectives for each commodity for the reduction of identified risks and monitoring progress of the program implemented to achieve those objectives.[38] This is consistent with my recommendation that food safety requirements for meat production be connected to known risks and that disease surveillance and other evaluation methods be used to monitor progress and identify any new concerns. There is limited scientific evidence linking on-farm food safety initiatives for livestock farms with foodborne illness reduction and further study will be necessary to measure their effectiveness.

OFFS programs require recognition if they are to have meaning within the marketplace, which is an important incentive for many farmers to participate in these programs. Clearly, any provincial recognition program should complement the extensive work that has gone into developing the national recognition program. A suggestion has been that OMAF recognize provincial OFFS programs for those commodities where no CFIA nationally recognized program exists.[39] I believe this suggestion is consistent with the development of a staged approach that will also allow for as much harmonization with national CFIA programs as producers can realistically achieve.

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[37] OMAF, OFFS Working Group 1 *Program Integration and Coordination Monthly Progress Report.* (1 March 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/prog_gr101.htm [accessed April 30, 2004].

[38] Specific suggestions include: baseline studies, monitoring CCP's for compliance and record-keeping; collecting information on existing and emerging hazards; a web-based list of existing corrective actions; and a communication strategy to inform stakeholders and develop strong linkages for information to and from the national program. See OMAF OFFS Working Group 4, *Program Evaluation and Enhancement Final Progress Report*, (22 April 2004), http://www.gov.on.ca/OMAFRA/english/offs/facts/prog_gr4.htm [accessed April 30, 2004].

Some farms are well on their way to implementing OFFS plans. For the rest, I believe the provincial government will need to put a framework in place. In my view, it is only logical to implement a mandatory requirement that all farms have HACCP-based OFFS plans and that key pre-requisite programs be required by regulation. There is already a strong buy-in to the concept by livestock producers in Ontario and others along the food continuum, although their preference is to keep it voluntary.[40] Therefore, a progressive approach may be required for producers, beginning with farms assessing what their practices currently are, building awareness about good agricultural and production practices that reduce foodborne hazards and necessary prerequisite programs, identifying where their practices fall short and developing an action plan to achieve a HACCP-based OFFS plan in the future.[41] A similar approach is currently undertaken by farmers who develop an environmental farm plan.[42]

The Ontario OFFS framework should lay out a process, with incentives and requirements, that provide for training and support to farmers to make steady progress toward a fully recognized and audited HACCP-based OFFS plan that should eventually become mandatory. A somewhat similar approach is being taken with respect to the preparation of nutrient management plans.[43]

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[39] OMAF, OFFS Working Group 3 *Program Recognition Monthly Progress Report*, (2 April 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/prog_gr3.htm [accessed 30 April 2004].

[40] Five organizations representing 34,000 Ontario livestock producers recommended HACCP on-farm food safety programs, instead of licensing of farms, as the basis for ensuring consumers have a safe food supply. Ontario Cattlemen's Association, Ontario Pork, Ontario Sheep Marketing Agency, Ontario Cattle Feeder's Association, Ontario Veal Association, *Joint Submission Regarding Bill 87, FSQA*, (November 2001), available from http://www.ontariosheep.org/Joint%20Sub%20Regarding%20Bill%2087.html, [accessed 9 March 2004].

[41] See for example, Manitoba Agricultural and Food, *Canadian on-Farm Food Safety: Good Production Practices in Livestock Production to be Used as a Safe Food Production Manual for any Livestock Commodity and as a Reference for completing a Self-Assessment Form*, available from http://www.gov.mb.ca/agriculture/foodsafety/gpp/index.html [accessed 9 June 2004].

[42] The Environmental Farm Plan is a voluntary program, dealing with key on-farm environmental issues, such as disposal of farm waste and safe storage of farm chemicals. Farmers attend a workshop, prepare a self-assessment based on regulations and best practices in a manual, and an action plan to improve their practices. Once the plan is approved by a peer review committee, farmers can apply for funding assistance to implement their plan. See http://www.gov.on.ca/OMAFRA/english/environment/efp/efp.htm [accessed 20 April 2004].

The OFFS framework will need to integrate and parallel initiatives in the marketplace and elsewhere in the food continuum. For some commodities, marketplace demands are making participation in OFFS programs a mandatory requirement for continued market access.[44] Some supply-managed commodities have announced intentions to make participation in national OFFS programs a mandatory condition of licensing.[45] As mandatory HACCP programs are implemented by meat processing plants and others in the food continuum, they will require HACCP certified suppliers.[46] Therefore, in pursuing its goal of increasing the marketability of Ontario's food products, OMAF needs to ensure that OFFS programs keep pace and can be used to meet market demands.

The agri-food industry's leadership role in the area of on-farm food safety should be acknowledged and encouraged to continue in collaboration with the federal and provincial initiatives. A provincial framework, with a clear set of prerequisite programs as outlined in the next section, integrated with the federal framework and flexible to accommodate the wide diversity of farm operations in Ontario, would help Ontario farmers, particularly where reporting and documentation requirements can be streamlined for the different programs. The provincial government should provide leadership in working with the agri-food sector to:

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[43] Under the *Nutrient Management Act, 2002*, smaller farms have until 2007 to complete their farm nutrient management plan. Low cost nutrient management courses are offered across the province, including training to use the NMAN computer program and a copy of the software. Farmers may also hire consultants, who have been accredited by OMAF. See OMAF, *General Requirements for Certification and Licencing*, (9 June 2004), available from http://www.gov.on.ca/OMAFRA/english/nm/cert/requirements.htm [accessed 10 June 2004].

[44] See for example the *Vendor Recognition Program* of the Canadian Council of Grocery Distributors. Their questionnaire for meat and poultry vendors deals with food safety issues (based on HACCP and FSEP requirements) and humane animal treatment, available from http://www.ccgd.ca/pdf/VRP%20Final%20_%20English.pdf, [accessed 29 April 2004].

[45] In July, 2001, the Chicken Farmers of Canada Board voted that their COFFS program be made mandatory as soon as administrative systems are in place to support validation processes. The Chicken Farmer, Volume 5, No 3, April 2003, available from www.chicken.ca/pdfs/April2003E.pdf [accessed 10 June 2004]

[46] As noted earlier, CFIA requires federally licensed plants to implement HACCP plans and the USDA has required all plants to have HACCP plans since 1997. Industry integration also plays a role. For example, the CQA program for pork applies to both producers and processing plants.

- facilitate overall visioning and consensus development;
- provide strategic funding to influence direction and hasten development and adoption;
- provide technical expertise in program development;
- provide strategic support to industry-led initiatives;
- provide government-led initiatives to complement industry initiatives (e.g. recognition); and
- provide regulatory support to OFFS programs where needed.[47]

I recommend that the Ministry of Agriculture and Food support the development and delivery of an on-farm food safety program specifically targeting small and medium-sized mixed livestock farms in conjunction with the producer groups who represent these farmers.

I recommend that the Ministry of Agriculture and Food work with stakeholders to create a provincial framework for recognition of provincial on-farm food safety programs and that the Ministry recognize provincial programs where no nationally recognized program exists.

4.4 Prerequisite Programs for On-Farm Food Safety Plans in Ontario

4.4.1 Introduction

Before launching HACCP-based programs, there is a requirement for prerequisite programs to be in place. As noted in Chapter 3, these allow for environmental conditions that are favourable for the production of safe food. In the farm context, these are often called good agricultural practices (GAPs) or good production practices (GPPs). Once a pre-requisite program is in place, there must also be a process for determining whether a farmer is in compliance with the program.

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[47] OMAF, *Concept Paper: On-Farm Food Safety Strategy for Ontario and Quality Assurance Initiatives*, (16 January 2004), available from http://www.gov.on.ca/OMAFRA/english/offs/facts/concept.htm [accessed 20 April 2004].

Prerequisite programs are building blocks to a HACCP-based on-farm food safety plan. Existing programs such as the LMEP, and new programs based on the Codes of Practice for the Care and Handling of Animals,[48] biosecurity, disease surveillance, food handling, and deadstock disposal should be developed into prerequisite programs that can be made mandatory by regulation. A number of these programs may take the form of training, to simply reinforce basic minimum competencies and knowledge of any government regulations or policies. But many of these programs will need to emphasize a new requirement to document what farmers may well be doing all of the time, but not writing down. Forms have been developed for record keeping with respect to prerequisite and HACCP-based procedures, to encourage farmers to "write it, do it, and prove it." If these become mandatory programs, the use of the forms for certain purposes, such as feed and medicine traceability, may need to be required by regulation.

The CFA has identified a list of on-farm food safety practices to address specific hazards on-farm, which are fairly generic for all livestock[49] and have formed the basis for many of the national COFFS programs. Many GPPs will be similar for all commodity groups and a few may be specific to a particular animal or production system. These programs have been evolving and newer versions adapted to include the latest recommended procedures.[50] Development of consensus around GPPs is important in order to provide prerequisite food safety benchmarks for all farms, as they progress to HACCP-based on-farm food safety plans. Wherever possible, prerequisite programs should build on existing programs, a number of which are discussed in this section.

GPPs for livestock producers have been developed for the following: design and management of livestock production facilities and surrounding premises; cropping and feed production; equipment design, maintenance and calibration; sanitation, biosecurity and pest control for premises and equipment; livestock care and handling, including humane euthanization; livestock treatment; farm chemicals; medical supplies; on-farm processing and storage of feeds; water systems; purchasing; personnel and training; transportation; and product storage.[51]

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[48] *Infra* note 74.

[49] Canadian Federation of Agriculture, *An Introduction to On-Farm Food Safety Practices*, (1997), *supra* note 25.

[50] For example, the revised *Safe, Safer, Safest* manual incorporated CFIA requested biosecurity measures to keep a visitor's log in the restricted area and post signs indicating the barn is a restricted area, *supra* note 45. The 2003 Canadian Sheep Federation manual includes a Declaration of Shipping Status form for farmers to sign, indicating any drug use requiring withdrawal periods or the presence of any physical residues and recommends producers obtain an affidavit from feed suppliers that no ruminant by-products are in the feed, available from http://www.cansheep.ca/english/coffs_practices.htm [accessed 10 June 2004].

Many OFFS programs use manuals with checklists and forms for producers to fill in, with additional resource and reference material on GPPs. The answers to the checklists are designed to identify the critical control points, from which the producer can develop customized GPPs and protocols suited to his or her farm.[52]

I recommend that the Ministry of Agriculture and Food establish requirements and training programs for key prerequisite programs for on-farm food safety plans, including good production practices.

These mandatory requirements should be established in consultation and in collaboration with key stakeholders, including producer groups and phased in over a reasonable period of time.

4.4.2 Traceability, Disease Surveillance and Biosecurity

These three issues are discussed in full in Chapter 3, A Science-Based Approach to Food Safety. As noted, traceability for animals, feed, livestock medicines and farm premises are fundamental to a food safety system. Disease surveillance on farm detects zoonotic animal diseases that can enter the food chain and cause foodborne illness to humans in order that farmers can either treat diseased animals or remove them from the food chain altogether. Biosecurity involves measures to prevent the spread of animal disease from one animal to another on the same farm or between farms.

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[51] *Ibid.* For commodity examples of GPPs, see *Ontario Veal Quality Assurance Program (OVQAP) – Industry Partners Manual*, *infra* note 52, and the GPPs for Chicken Producers in *Coming soon to a Farm Near You – On-Farm Food Safety*, CFIA news release (11 November 2002). http://www.inspection.gc.ca/english/corpaffr/tipsidee/ccna/20020301e.shtml [accessed 4/26/2004]

[52] For example, the OVQAP producers must complete a manual and maintain Feed and Medication Inventory Forms, Individual Treatment Forms and Animal Movement Forms for at least 3 months. A validator evaluates these documents and the farm operation and if satisfactory, the OVA will certify the herd as an OVQAP herd and issue tamper proof ear tags. Ontario Veal Association, *Ontario Veal Quality Assurance Program, Industry Partners Manual*.

Farmers are key to implementing these measures to achieve food safety objectives. As well as documenting the measures taken, best practice requirements and training for traceabiltiy, disease surveillance and biosecurity should also be built into OFFS programs, either as prerequisite programs or by regulation. As noted earlier, the marketplace is also demanding traceability measures from the retail establishment back to the producers,[53] so recommended practices should also be compatible with these requirements.

OMAF and CFIA both play a role in animal disease surveillance and both have prepared various information pieces on animal diseases, particularly contagious and reportable diseases.[54] They also have prepared resource materials for farmers on biosecurity.[55] Some commodity groups and farm media also provide this information to their members or readers. However, it does not appear that there is any systematic effort to ensure that all producers actually receive information on reportable or zoonotic diseases. In evaluations of the LMEP, farmers have repeatedly identified the need for more education on disease diagnosis and treatment.[56] Neither the LMEP manual nor the workshops describe disease conditions of livestock or the various treatments for the conditions, which would be helpful for farmers to receive. It would be particularly helpful for OMAF to develop GPPs and animal husbandry protocols that will reduce environmental and other farm-management factors that contribute to disease and establish farm recordkeeping systems to give farmers pre-emptive and predictive capabilities to avoid disease on-farm.[57]

I recommend that the Ministry of Agriculture and Food ensure that all farmers who raise animals for food receive specific information on

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[53] *Supra* note 46.

[54] OMAF, *Livestock Index Page*, available from http://www.gov.on.ca/OMAFRA/english/livestock/index.html [accessed 20 April 2004].

[55] For example, *General Biosecurity Practices* , OMAFRA Info Sheet (21 March 2001) and CFIA, *Farm Biosecurity: A Common Sense Guide* (10 May 2001).

[56] See Anderson et al, *infra* note 70.

[57] R. Mochia, *Research Programs (OMAF) – Fish Program*, available from http://www.uoguelph.ca/research/omaf/animals/fish.shtml [accessed 29 April 2004].

disease surveillance and reporting for each type of animal, how to access additional resources and their obligations with respect to reporting.

Programs to encourage periodic on-farm animal health visits by veterinarians and province-wide baseline animal health surveys should be encouraged for all commodity groups, particularly where they can support the development of HACCP-based OFFS programs.

4.4.3 Residue Issues

4.4.3.1 Introduction

Harmful residues of veterinary drugs in the meat from animals and residues due to chemical contamination of feed by insecticides, fungicides, or herbicides are a food safety concern. Chemicals applied to crops prior to harvest and grain protectants used during storage are also potential contaminants, as well as mold toxins that may affect food. The risks to humans from these residues may include allergic reactions, poisoning or cancer.[58]

Residues are primarily a food safety issue if they exceed acceptable limits. It is the federal government that largely regulates these matters.[59] Residues are increasingly a concern to consumers as evidenced by surveys,[60] as well as the growing market for hormone-free, natural and certified organic meat and poultry. It is not feasible to test every animal for residues of feed or medicines and it is not possible to remove them, once they are in the meat. Therefore, from a risk management perspective, farmers must know the potential sources of residues and ensure their practices prevent harmful residues or animals with harmful levels of residues from getting into the food chain.

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[58] CFIA and FSIS. Cited in: S. Whyte, *Residue control in Canada: Report on the surveillance of antibiotic and hormone residues in meat*. [No date], available from http://www.foodsafetynetwork.ca/food/residue_control_in_canada.htm [accessed 27 March 2004].

[59] Health Canada and CFIA share responsibility for administering Canada's residue control program. The Veterinary Drugs Directorate approves veterinary drugs and establishes maximum residue limits (MRLs) for chemical compounds in food products. CFIA monitors and enforces these standards through the National Chemical Residue Monitoring Program. Health Canada, *Setting Standards for Maximum Residue Limits (MRLs) of Veterinary Drugs Used in Food-Producing Animals*, (24 January 2003) available from http://www.hc-sc.gc.ca/vetdrugs-medsvet/mrl_maximum_residue_levels_e.html [accessed 6 May 2004]. A Codex draft circulating at Step 6 on Draft Maximum Residue Limits of Veterinary Drugs in Foods, may soon establish international standards. See http://www.hc-sc.gc.ca/food-aliment/friia-raaii/ip-pi/codex/html_doc/e_c103_24_abstract.html [accessed 12 March 2004].

[60] A 2003 survey found 74% of Americans were concerned about the presence of antibiotics in meat. See http://www.organicconsumers.org/foodsafety/beef052903.cfm [accessed 10 June 2004]. A 2003 Ohio State University study found consumers ranked the top three food safety issues as: pesticides in food, contaminated water and growth hormones in meat, see http://www.newfarm.org/news/060103/0612/food_safety.shtml [accessed 10 June 2004].

There are a number of issues of recent concern, including the use of hormonal growth promotants, emergence of drug-resistant bacteria that may be linked to the use of antimicrobial drugs in the production of animals,[61] and "off-label" use of livestock medicines.[62] The provincial government does not exercise legislative authority over these issues, however, to the extent that provincial OFFS programs can minimize the risks associated with using these drugs and the LMEP can encourage proper practices, provincial initiatives can have a positive impact. Proper treatment protocols, identification of treated animals, accurate record keeping, adherence to withdrawal times, only using drugs approved for specific animals, careful use of medicated feeds and topical treatments as well as testing of purchased animals can all minimize accidental introduction of residues into meat animals and should be required practices in OFFS programs.

4.4.3.2 Residues due to Livestock Medicines and Antimicrobial Drugs

There are a number of sources of information for Ontario livestock producers on residue avoidance.[63] The Ontario LMEP is a voluntary program, which promotes the responsible use and safe handling of livestock medicines used on-farm. It provides commodity-based training courses for livestock producers of dairy, beef, veal, sheep and goat, poultry, equine, bees, and fur-bearing animals.[64]

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[61] The WHO and others are concerned about the passage of drug resistant varieties of *Salmonella* and *Campylobacter* from livestock to humans. See USDA Economic Research Service, *Livestock Drugs: More Questions than Answers?* Agricultural Outlook, (September 2001). The EU has banned the livestock use of growth promoting hormones and antimicrobial drugs that are also used for humans. Health Canada is developing a comprehensive regulatory policy on antimicrobial resistance.

[62] A drug that has been tested and approved for one type of animal, but is used for another type is called "extra" or "off" label use. It is not permitted in Canada unless prescribed by the producer's veterinarian, because withdrawal standards and dosage rates are species specific. The Canadian policy is described in: CFIA, *Canada's Response to European Commission Mission Carried out to Evaluate the Control of Residues In Live Animals and Animal Products*, 15 December 2000, available from http://www.inspection.gc.ca/english/anima/meavia/eu/20001215eue.shtml [accessed 6 May 2004]

[63] Producers get their information about medicine use from their veterinarian (70%) or from the label or Compendium of Veterinary Pharmaceutical Products (44%) – see *infra* Anderson et al, note 70. *The Food Animal Residue Avoidance Databank*, FARAD, a computerized data bank of

LMEP courses are taught by trained veterinarians and reinforce the following good practices: the purchase of vaccines, antibacterials and other medications from licensed livestock medicine outlets or the herd veterinarian; proper storage and handling; attention to the label for proper dosage information, expiry date and a Drug Identification Number (DIN) indicating that it is approved in Canada; reading and retaining the package inserts; and keeping a medication inventory form and record of drug use for each animal.

The completion of the LMEP can be integrated as a mandatory requirement of OFFS programs.[65] Alternatively, completion of the program could be made a mandatory prerequisite to purchase livestock medicines by the government,[66] in a similar manner to what is currently required for purchasing certain pesticides.[67]

The College of Veterinarians of Ontario has further recommended that the government make all microbials used for disease treatment and control available by prescription only.[68] Other countries, such as Denmark have

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residue avoidance information on approved medications for farm animals is available from http://www.farad.org/faradpro/ [accessed 10 June 2004].

[64] LMEP is delivered by Ridgetown College, University of Guelph. It was developed by the Livestock Medicines Education Committee, representing commodity and industry partners. Participants attend a workshop, receive a binder with reference materials and pass an exam to obtain a certificate. The fee is $60 ($100 for Equine). See http://ontariolivestoc kmed.com/Default.htm [accessed 14 April 2004].

[65] The *OVQAP* requires completion of LMEP by the end of the third year of participation. Other programs list these practices as GPPs as in *Quality Starts Here*, available from http://www.qualitystartshere.pn.ca/guide/06_practices.html [accessed 29 April 2004].

[66] Producers were told this would be the case after March 31, 2003, but this was delayed until further policy analysis could be completed. See http://ontariolivestockmed.com/Default.htm [accessed 14 April 2004].

[67] O. Reg. 914 under the *Pesticides Act* (Ontario) makes it mandatory for farmers to be certified through the *Grower Pesticide Safety Course* in order to buy and use Schedules 1, 2 or 5 pesticides on land they farm. Over 28,000 Ontario farmers are Certified Growers. See http://www.ridgetownc .com/opep/growertraining/GrowerTraining.htm, [accessed 28 April 2004].

[68] OVC Spring 2003 UPDATE, Vol 19 No.2, letter to Agricultural Minister: "The College, therefore endorses the recent '*Uses of Antimicrobials in Food Animals in Canada: Impact on Resistance and Human Health*, Report of the Advisory Committee on Animal Uses of

banned sulfa drugs from livestock medications and now require all medication meant for food producing animals to be obtained by prescription.[69]

Although record keeping and inventory control is stressed in the LMEP course, an evaluation of the program noted many farmers did not carry through and do so, in spite of good intentions.[70] The poultry industry requires producers to prepare flock information sheets to accompany poultry to the processor, outlining all medications administered. By requiring this record to accompany the animal to disposition, inspectors will be alerted to potential residue problems. This is an important aspect of traceability and OFFS.

The successful completion of the LMEP should be a prerequisite program and good production practices based on the LMEP, including medication tracking records for each animal, should be an ongoing part of Ontario OFFS programs.

I recommend that the provincial government promulgate a regulation prohibiting the sale of livestock medicines or feed additives to any person not holding a Livestock Medicines Education Program Certificate.

4.4.3.3 Residues due to Feed

One possible source of residues in meat is feed given to animals to eat. The regulation of feeds, including medicated feeds, is a federal issue, but OFFS programs can require good production practices with respect to feed, which can have significant preventative and traceback effects on feed residues.[71]

Antimicrobial and Impact on Resistance and Human Health.' This report, prepared for Veterinary Drugs Directorate, Health Canada, recommends that the government 'make all antimicrobials used for disease treatment and control available by prescription only.' The College…encourages OMAF to take the very important step of eliminating the availability of these drugs through an LMO." See www.cvo.org [accessed 29 April 2004].

[69] Ontario Veal Association, *OVQAP*, *infra* note 52.

[70] Anderson, et al. *Changing Attitudes and Actions – Livestock Medicines Courses in Ontario*, OMAF, (1999) available from http://www.gov.on.ca/OMAFRA/english/livestock/animalcare/amr/facts/anderson.htm [accessed 14 April 2004].

[71] For example, Ontario Cattlemen's Association lists 8 GPPs to ensure feed medications are stored separately, properly labeled, accurately measured, administered to the right animals,

OFFS programs emphasize preventing cross-contamination of feed by properly cleaning equipment used in moving or mixing feed. As well, proper sanitation and pest control programs will ensure that biological contamination, such as molds, of feed does not occur.

Since June 2000, the Codex Alimentarius Commission's Ad Hoc Intergovernmental Task Force on Animal Feeding has been developing a *Code of Practice on Good Animal Feeding*, which itemizes the minimum standards for good animal feeding practices on-farm and good manufacturing practices during the harvesting, handling, storage, processing and distribution of feed and feed ingredients for food-producing animals.[72] This Code may be a helpful source for OFFS standards.

Good production practices on animal feeding should be included in OFFS programs, including record keeping for traceability.

4.4.4 Animal Welfare and Handling

4.4.4.1 Introduction

A number of groups who made submissions to the Review were primarily concerned with animal welfare issues for livestock. Studies have shown that stress results in reduced feed conversion, greater production of manure, a decrease in the level of immunity and an increase in the excretion rate of pathogenic bacteria in the feces of stressed animals.[73] However, there is no conclusive link between these results and subsequent foodborne illness in humans. Nevertheless, efforts to prevent food safety hazards should focus on minimizing stress as well as ensuring that certain sick or injured animals do not get into the food chain.

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equipment is flushed to prevent contamination, ruminant derived feed is not purchased, etc. http://www.qualitystartshere.on.ca/guide/06_practices.html [accessed 29 April 2004].

[72] J. Murphy, OMAF, *International Standards on Good Animal Feeding are on the Horizon*, (2004), available from http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info_feeding.htm [accessed 27 April 2004]. It is expected to be adopted in 2004. Draft code available from ftp://ftp.fao.org/codex/alinorm03/Al0338ae.pdf [last updated 1 February 2004].

[73] Ontario Veal Association, *OVQAP*, *infra*, note 52.

4.4.4.2 Safe Animal Handling and Transportation

There are a series of *Recommended Codes of Practice for the Care and Handling of Farm Animals* that have been developed by the Canadian Agri-Food Research Council (CARC) over many years.[74] These are voluntary and not intended as production manuals, but rather as education tools in promoting sound husbandry and welfare practices. They provide detailed information on how to handle animals safely, including shelter and housing, density, feed and water, pasture, herd or flock management, birthing and weaning, and humane euthanasia. However, since these programs are voluntary, there is no way to verify that farmers or workers are receiving or implementing the training.

Although the scientific evidence of the link between animal stress and food safety is not extensive, this is an increasingly important issue for consumers and, in some respects, the market is imposing new animal welfare standards on the producers and they are increasingly included in quality assurance programs. A number of U.S. retailers and restaurants have instituted animal handling policies that relate to the care, housing, transport and slaughter of livestock from which their products are derived. Suppliers are audited against this standard. In some cases, these standards have carried over to their Canadian counterparts.[75] There is also a parallel move to "humane labeling" in the U.S.,[76] the U.K.[77] and British Columbia.[78]

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[74] A specific Code of Practice for the Care and Handling is available for: bison, deer, horses, sheep, veal calves, beef cattle, dairy cattle, mink, pigs, ranched fox, goats, chickens, turkey and breeders from hatchery to processing plant, poultry-layers, and early weaned pigs. The Codes were updated or created in 1995 by CARC, along with the Canadian Federation of Humane Societies and others. See http://www.carc-crac.ca/English/codes_of_practice/index.htm [accessed 14 April 2004].

[75] 2003 *BKC Animal Handling Policy*, available from http://www.burgerking.com/CompanyInfo/public_polocies/2003.aspx [accessed 14 April 2004]. An initiative of the Food Marketing Institute (FMI) and the National Council of Chain Restaurants (NCCR) in the U.S. to develop a consistent industry-wide system of animal welfare guidelines and audits for suppliers will also impact U.S. owned Canadian companies, as well as Canadian suppliers once it is in place. See H, Mayer, *Animal Welfare Verification in Canada: A Discussion Paper*, George Morris Centre, (September 2002).

[76] The American Humane Association has introduced animal welfare guidelines for producers with a "Free Farmed" certification. They prohibit widely accepted practices such as induced molting and administering antibiotics as growth promoters. See *Humane labelling latest niche*, Journal of the American Veterinary Medical Association, (November 15, 2000), available from http://www.avma.org/onlnews/javma/nov00/s111500d.asp [accessed 14 April 2004].

[77] The Royal Society for the Prevention of Cruelty to Animals launched its "Freedom Food" brand in 1994 as an alternative food brand certified from humanely raised animals.

The Ontario Farm Animal Council (OFAC)[79] web page on animal care, provides links to a wide range of animal care resources and they also operate an Animal Care Helpline Service, which assists farmers in providing adequate or improved care for their animals through advice and referral and liaison with the Ontario Society for the Prevention of Cruelty to Animals (OSPCA).[80] Commodity groups have generally been including information on animal welfare and the above noted codes of practice in recently developed on-farm food safety manuals.[81] In order to maximize producers' ability to respond to market requirements as well as food safety requirements, some flexibility in the OFFS programs to incorporate animal welfare concerns and standards, as well as auditing capacity, will be important to avoid duplication and conflicting standards. Some programs already address food quality issues, as well as food safety, which demonstrates that it is possible to combine program components.[82] Any system should also be flexible enough to accommodate changing standards in animal husbandry practices and animal welfare standards.

Good production practices for animal welfare, handling and transportation should be included as part of the OFFS programs.

4.4.5 Non-Ambulatory Animals or Downers and Deadstock

Animals that have become disabled and non-ambulatory are of particular concern with respect to animal welfare. A brochure prepared by the OFAC entitled "Preventing and Handling Non- Ambulatory Livestock on the Farm" provides information for farmers on how to deal with this concern.[83] Training on these matters, including humane euthanasia, should be part of

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[78] L. Mobray, *SPCA Certified Standards for the Raising and Handling of Laying Hens*, BC SPCA (Updated October 2001), available from www.spca.bc.ca/farm [accessed on 10 June 2004].

[79] *Supra* note 20.

[80] See www.ofac.org/links.html [accessed 6 May 2004]; http://ofac.org/anicare.html [accessed 6 May 2004]. OFAC refers cases to the OSPCA and vice versa and offers to accompany OSPCA inspectors onto farms to assist. See letter to the editor from Leslie Ballentine, Public Affairs Director, OFAC, *Wendell Palmer vs. the Humane Society – the readers respond*, available from http://www.betterfarming.com/archive/2004/jan04-3.htm [accessed 6 May 2004].

[81] *Supra* note 74; for example, Chicken Farmers of Canada, *Safe, Safer, Safest*, *supra* notes 30 and 45.

[82] For example, Ontario Veal Association, *OVQAP infra* note 52.

[83] See http://www.ofac.org/ambulat.html [accessed 6 May 2004].

any OFFS program. The transport and slaughter of non-ambulatory animals is dealt with in subsequent Chapters.

Deadstock disposal issues are discussed in full in Chapter 7. Currently, the Environmental Farm Plan provides information on the requirements for proper handling of deadstock on farms. This will need to be updated to incorporate any new requirements in the regulations under the *Nutrient Management Act, 2002* and the regulations under the *FSQA*, if the *DADA* is repealed.[84] In particular, any requirements for record keeping for traceability, disease surveillance and testing (e.g. BSE) or monitoring should be incorporated in training for OFFS plans.

I recommend that the Ministry of Agriculture and Food provide training on safe and proper handling of non-ambulatory animals on-farm, humane euthanasia, and on-farm disposal of livestock and poultry mortalities.

Good production practices on these matters should also be a component of or a prerequisite program for OFFS programs.

4.5 Training and Certification

4.5.1 Education and Training on On-Farm Food Safety Programs

As noted in Chapter 3, awareness, education and training are fundamental to overcoming barriers to implementing HACCP, particularly in small and medium sized enterprises. Researchers have identified similar barriers to successful implementation of HACCP-based OFFS programs.[85] The CFA has produced education materials for producers,[86] and each national commodity group is developing their own OFFS manuals and training materials based on HACCP principles.

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[84] For example, G. Koebel, A. Rafail & J. Morris, OMAF, FACTSHEET No. 03-083 *On-Farm Composting of Livestock and Poultry Mortalities* (November 2003).

[85] *Expert Advisory Panel Report*, *supra* note 24, p.10. Three barriers identified included: knowledge barriers, attitudinal barriers and behaviour barriers, including time and resources.

[86] For example, see *Introduction to On-Farm Food Safety*, a 27-page information booklet and quarterly COFFS newsletters. http://www.cfafca.ca/english/programs_and_projects/onfarm_food_safety.html, [accessed 29 March 2004].

The ongoing training of staff on food safety aspects of the operation is a fundamental element of HACCP programs. HACCP programs also require recordkeeping for verification that training has actually occurred. A comprehensive staff training package dealing with HACCP, prerequisite programs as outlined above, good production practices for animal health and disease prevention, needs the collaboration of a number of groups to prepare, update and deliver it. One study discussed in Chapter 3, on implementing HACCP-based OFFS programs, stressed the need for OMAF to be directly involved, particularly with respect to small and medium operations and to direct financial assistance to lower the cost of providing support services needed for HACCP-based programs, particularly training, extension[87] and resource materials such as sector specific HACCP guides. The study suggested that one or two key industry associations could be selected to receive government funds to staff food safety positions to support extension and training activities, as well as a number of regional government positions.

I believe that OMAF will need to implement these measures for small and medium sized farms that may experience difficulties participating in the national commodity OFFS programs, if we are to achieve the objective of all farms having an OFFS plan. These initiatives must be done in collaboration with the industry, but clear leadership and funding will need to be allocated within the Ministry. It also seems clear that in this area, OMAF needs to reinforce extension education. For example, the Expert Advisory Panel noted:

> *It is not enough to provide a set of guidelines and expect producers to comply with standards. Industry organizations and their producer members must be provided with ongoing information, a two-way dialogue, and support that will promote the adoption of new practices. Recent research has shown that producers prefer to have on-site visits when learning about food safety production practices, and will implement procedures*

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[87] Extension programs involve outreach and education to individual farmers in their communities or on their farm. Specific extension education departments and programs encourage farmers to download information and enrol in distance education programs.

> *correctly when shown in terms specific to their site. It has been argued that on-farm food safety programs should not waste money by putting producers in classrooms; rather, available funds need to be invested into effective on-site visits.*[88]

This is consistent with evaluations of the LMEP, which observed that one-on-one interactions on farm were well received and encouraged on-farm audits as an opportunity for education:

> *Producers are not likely to implement innovations after taking a four-hour workshop. Extension education is a matter of constantly reinforcing and repeating a message until it starts to sink in.*[89]

OMAF should also develop a program to certify OFFS planning consultants and consider developing a subsidy or incentive program to facilitate plan development, as has been done for Ontario environmental farm plans and nutrient management plans.

The recent APF Canada-Ontario Implementation Agreement explicitly requires that the Province of Ontario provide funding to support food safety, education and training programs.[90]

OMAF should develop accredited training programs, focussed on pre-requisite programs and record-keeping, within the provincial OFFS framework and facilitate their delivery across the province to ensure accessibility by all farmers and their employees.

4.6 On-Farm Food Safety Programs in Other Jurisdictions

Although many other jurisdictions have adopted a farm to fork approach to food safety, only a few have extended HACCP-based programs to the production level and these tend to be voluntary and industry sponsored, with government support. A number of jurisdictions have developed quality assurance programs, which build in a number of features related to food safety, such as traceability and preventing residues, as well as food quality, and animal welfare guidelines.

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[88] *Expert Advisory Panel Report*, *supra* note 24, p.10.

[89] Anderson et al, *supra* note 70.

[90] *APF Canada-Ontario Implementation Agreement, Annex E-Federal and Provincial Measures Plan 1.0 Food Safety and Food Quality*, ss.1.2 and 1.2.1, available from http://www.agr.gc.ca/cb/apf/index_e.php?section=info&group=impl&page=on_11 [accessed 29 April 2004].

The U.K. British Farm Standard, includes food safety, animal welfare and environmental stewardship, provides licensing for producers through an independent organization and the right to use a logo. It operates throughout the food continuum and it is sector specific for beef, lamb, pork and poultry. Traceability is built in with cattle having their own passports.[91]

Australian producers have recently adopted a new OFFS program entitled Livestock Production Assurance (LPA), which builds in traceability and on-farm record keeping, through a National Vendor Declaration waybill, required by all major livestock purchasers. Their quality assurance program covers the whole food chain, including saleyards, meat processing, butchers and export and is user-pay and externally audited.[92]

The U.S. approach to implementing "pre-harvest food safety" emphasizes the "ripple" effect on producers, which relies on mandatory HACCP requirements for meat and poultry plants and pressure from the retail industry, such as fast food restaurants, to ensure compliance on the farm. Government efforts focus on education of producers, encouragement of voluntary adoption of HACCP-compatible practices, third-party certification programs and sector specific initiatives,[93] research to address gaps in the science knowledge in this area, and conducting farm-to-table risk assessments.[94]

Alberta and Manitoba both provide OFFS support to their producers to adopt COFFS programs. Alberta has identified its role as ensuring producers have the tools and resources to adopt OFFS programs for their commodities, being flexible in delivery of this support, and providing technical expertise and auditing functions when requested by industry.[95] Manitoba has developed a manual and self-assessment form for producers, based on the COFFS program.[96] Saskatchewan has passed legislation to license delivery agents and recognize on-farm quality assurance programs.[97]

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[91] See http://www.littleredtractor.org.uk/whatis.asp [accessed 9 June 2004].

[92] MeatNews.Com, *Development of new Australian livestock assurance scheme is on track*, (June 17, 2003), available from http://www.meatnews.com/index.cfm?fuseaction=Particle&artNum=5598 [accessed 18 May 2004].

[93] National Cattlemen's Beef Association, *Beef industry leaders encouraged by significant reductions in E. coli incidence*. (Posted 5/4/2004) available from http://foodhaccp.com/msgboard.mv?parm_func=showmsg+parm_msgnum=1015261 [accessed 18 May 2004].

[94] T.J. Billy, *Implementing Pre-Harvest Food Safety – The U.S. Approach*, Remarks on behalf of FSIS/USDA to WHO Consultation on Pre-Harvest Food Safety, (2001) available from http://www.fsis.usda.gov/oa/speeches/2001/tb_preharvest.htm [accessed 8 June 2004].

4.7 On-Farm Slaughter

4.7.1 Introduction

Notwithstanding the provisions of the *Meat Inspection Act* (Ontario) that require the inspection of all livestock that is slaughtered for the purpose of processing meat into food for human consumption, producers of livestock are permitted to slaughter their own animals, on their own premises, for consumption by themselves and their immediate family.[98] Although this represents a very small portion of the total volume of meat produced for human consumption, this exemption engages the same animal welfare and food safety concerns that arise with illegal slaughter.[99]

4.7.2 Animal Welfare

Several animal welfare groups[100] advocate the regulation or abolition of uninspected on-farm slaughter to eliminate the undue suffering that results from inhumane slaughter when the animal is not properly stunned and exsanguinated because of ignorance of proper slaughter procedures or disregard for the welfare of the animal.

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[95] Agriculture, Food and Rural Development, *On-Farm Food Safety* (2002), available from http://www1.agric.gov.ab.ca/$department/deptdocs.nsf/all/afs4361?opendocument [accessed 9 June 2004].

[96] *Supra* note 41.

[97] *On-Farm Quality Assurance Programs Act*, S.S. 1998, c.O-4.1.

[98] O.Reg. 632/92, s. 2(1). Section 2(2) also waives the inspection requirement for an operator of an abattoir who slaughters poultry for a producer, for consumption by that producer and his or her immediate family, where the abattoir is operated solely for the custom slaughtering of poultry for producers. There are no plants currently licensed to conduct such slaughter, and in my view, there is no justification for continuing this exemption.

[99] Illegal slaughter is uninspected slaughter by someone who is not a producer or uninspected slaughter by a producer for consumption by persons outside his or her immediate family.

[100] Ontario Society for the Prevention of Cruelty to Animals, the Humane Society of Canada, the Animal Alliance of Canada and the Canadian Coalition for Farm Animals.

On the basis of the information I have received and the submissions to this Review, I am satisfied that such mistreatment does occur and needs to be addressed with more education and better enforcement, but I am not satisfied that this is typical of most on-farm slaughter. As industrialized as agriculture has become, livestock producers are still fiercely independent and extremely proud of their rural heritage. Many farmers rely on their own livestock as a source of food for their families, although fewer and fewer slaughter animals on the farm. Today, they are more likely to transport the animal to a local abattoir to be slaughtered and dressed. Nonetheless, farmers and livestock producers' associations,[101] want to see the exemption retained. For them, the elimination of on-farm slaughter represents the prohibition of something that is fundamental to their way of life.

4.7.3 Food Safety

All of the health issues that arise with respect to the production of uninspected meat apply to on-farm slaughter. Currently, there are no regulations or standards. I presume the governing assumption is that the producers will take the necessary steps to ensure the meat is safe because the health of themselves and their families is at stake. Unfortunately, inherent in that proposition is the further assumption that the producer has the necessary knowledge and equipment to produce wholesome meat. In many cases this may be so, but the consequences of ignorance in the production of meat can be serious.

4.7.4 Conclusion

In my opinion, the elimination of uninspected slaughter can be justified on both animal welfare and food safety grounds, but I also respect the position of those in the farming community and appreciate that such a prohibition would be an affront to those capable and caring farmers who slaughter on-farm in a humane and sanitary manner. I am also sensitive to the fact that an all-out prohibition of slaughter on Ontario's 30,000 farms with livestock would be extremely difficult to enforce.

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[101] Ontario Independent Meat Processors, Ontario Cattlemen's Association, Ontario Federation of Agriculture, National Farmer's Union, Ontario Veal Association and Ontario Sheep Marketing Agency.

My view is that on-farm slaughter for personal use should be exempt from inspection but should, by regulation, be subject to the requirement that animal slaughter be undertaken in a prescribed, humane manner and the processing of the meat done under prescribed sanitary conditions. Such regulation should be undertaken in conjunction with an education program that provides information on proper slaughter, meat cutting and food safety.

I recommend that regulations made under the *Food Safety and Quality Act, 2001* prescribe and describe acceptable procedures and equipment for on-farm slaughter and dressing.[102]

4.8 On-Farm Sales to Consumers

Farmers that sell meat and poultry products directly to the public at farm gate, through farmers' markets or through custom order and delivery are subject to the same risks of food contamination as many other retail operations. It is legal to sell these products, provided they are produced from animals slaughtered at a licensed abattoir. But, improper food storage, cross-contamination and other food handler sources of foodborne illness can arise in farm sales, as in a butcher or retail store. Therefore, farm gate sales and the persons involved in these activities should be subject to the same requirement for food handler training, as required of other retailers later in the continuum. Any farmers processing meat at their farm should be subject to the same requirements as all meat processors.

Currently, all public health units provide food handler training and certification to owners and operators of retail outlets and food service premises. This training could be adapted to include additional components that would be relevant to farm gate or farmers' market sales.[103] Commodity groups and OMAF could develop their own training programs as part of or separate from OFFS programs. Whatever the approach, it should be consistent across the whole province.

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[102] See for example M. Alexander et al, *Home Slaughtering and Processing of Beef*, available from http://muextension.missouri.edu/explore/agguides/ansci/g02208.htm [accessed 24 April 2004].

[103] Several health units have developed food safety materials for farmers' markets, which are required to be inspected by public health inspectors.

No vendor should be permitted to sell at any public location, such as a farmers' market, without food handler training. Issues of food safety relating to food premises generally are discussed in full in the Chapter on Meat Retail and Distribution.

I recommend that farmers who sell meat or poultry products directly to the public be subject to the same standards, level of inspection and food handler training requirements as any other retailer.

4.9 On-Farm Inspection

At present, inspection rarely happens on-farm with respect to food safety or animal health. The exception to this is in the supply-managed sectors, such as dairy, eggs and chicken, where inspectors ensure compliance with quota and other requirements of their marketing boards.[104] For example, the Dairy Farmers of Ontario undertakes extensive food safety and quality inspections on dairy farms on behalf of OMAF. OSPCA inspectors have powers to enter farms to ensure animal welfare.

When prerequisite programs and mandatory OFFS programs are implemented, there will need to be inspection, verification and auditing of these programs. OMAF, in consultation with industry and commodity groups, will need to determine which elements of the OFFS framework may require government inspection, verification, or independent third-party auditors.

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[104] *Supra* note 10.

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Chapter 5 - Transportation and Livestock Sales

5.1 Transportation

5.1.1 Introduction

Animals destined to become food for humans are usually transported at least once if not several times prior to slaughter. The number of times an animal is transported will depend on the species, on the husbandry practices of the producer and on the marketing method used to sell the animal for slaughter. Some animals are raised to the proper weight for slaughter and sent directly to slaughter from the birth farm. Others are sent from their farm of origin to other farms or feedlots for finishing. Animals are transported to and from farms, artificial insemination centres, feedlots, community sales, abattoirs, and veterinary clinics.

The transportation of animals is conducted by a variety of people, including producers, operators of feedlots, operators of slaughter plants and transportation companies. Vehicles used to transport animals range from pickup trucks and small trailers to full-sized transport trailers that can carry 40 head of cattle, dozens of pigs or poultry by the hundreds.

The transportation of meat and meat products is also conducted by a variety of people and, as with the transportation of animals, no specialized registration or licensing for the transporter or vehicle is required.

5.1.2 Food Safety Issues

Food safety concerns that relate to the transport of animals arise from the mistreatment of the animals and the potential for cross-contamination. Although the extent of the impact of inhumane treatment on meat safety is not clear, there is evidence that suggests that malnourished and unduly stressed animals are more susceptible to disease and a substantial portion of condemned livestock are animals that have been subjected to inhumane treatment.

The transportation of meat and meat products gives rise to the same risks associated with the storage and handling of meat. If meat products are stored at inappropriate temperatures during loading, unloading or transit, they can be compromised and create a serious health risk. Also, in the event meat products are not protected with proper packaging, they may be exposed to biological, physical or chemical contaminants.

The food safety risks involved in the transport of animals and meat products are significant and warrant regulation.

5.1.3 Legislative Structure

5.1.3.1 Ontario Legislation

Although there is very little provincial legislation that addresses the issues relating to the transportation of livestock, the *Livestock and Livestock Products Act*[1] and the *Livestock Community Sales Act* (*LCSA*)[2] do regulate the transport of non-ambulatory animals to abattoirs.

The *Meat Inspection Act* (Ontario)[3] also addresses transportation issues that relate to non-ambulatory animals at abattoirs, the disposition of animals that die en route, and transport container standards for the transport of meat and meat products. Abattoir operators are required to ensure that meat and meat products are transported in containers which meet certain construction and refrigeration requirements and provide protection from contamination.

The transport of meat and meat products is further regulated by the *Food Premises* regulation under the *Health Protection and Promotion Act*[4] in that the equipment used for the transportation of food is required to be of sound and tight construction, kept in good repair and of such form and material that it can be readily cleaned and sanitized.[5] Further, operators of food premises who transport food are required to do so in a manner which prevents contamination of the food and maintains the food at temperatures prescribed in the *Food Premises* regulation.[6]

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[1] *Livestock and Livestock Products Act*, R.S.O. 1990 c. L.20.

[2] *Livestock Community Sales Act*, R.S.O. 1990, c. L.22.

[3] *Meat Inspection Act* (Ontario), R.S.O. 1990, c. M.5.

[4] *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.

[5] R.R.O. 1990, Reg.562, amended to O.Reg.502/01, s. 18.

[6] R.R.O. 1990, Reg.562, amended to O.Reg.502/01. The *Food Premises* Regulation sets out specific temperatures at which meat and meat products must be kept during transportation as well as requirements to identify the meat processing plant of origin by tag, stamp or label. R.R.O. 1990, Reg.562, ss. 32, 33, 35 and 39.

Animal welfare issues are dealt with under the *Ontario Society for the Prevention of Cruelty to Animals Act*[7] which permits the Ontario Society for the Prevention of Cruelty to Animals (OSPCA) to take action where an animal is observed to be in immediate distress.[8]

5.1.3.2 Federal Legislation

In Canada, the Canadian Food Inspection Agency (CFIA) has primary jurisdiction over the transport of livestock in its administration of the *Health of Animals Regulation.* The regulation applies to the carriage of animals entering, leaving and within Canada.[9]

The *Health of Animals Regulation* sets limitations for the length of transport[10] and prohibits the transport of an animal that cannot be transported without undue suffering or an animal that is likely to give birth during the expected journey.[11] Physical mistreatment of animals being transported and overcrowding on vehicles is also prohibited.

The regulation sets out criteria for loading and unloading equipment, for transport containers, the provision of food and water for animals in transit, required records for transportation, and the disposal of injured animals. The regulation requires segregation of animals of different species or of substantially different weight or age, protection of animals from sickness or injury, protection from extremes of weather, and reporting of injured animals.

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[7] *Ontario Society for the Prevention of Cruelty to Animals Act*, R.S.O. 1990, c. O.36.

[8] Distress is defined as "the state of being in need of proper care, water, food or shelter or being injured, sick or in pain or suffering or being abused or subject to undue or unnecessary hardship, privation or neglect" in the *Ontario Society for the Prevention of Cruelty to Animals Act*, R.S.O. 1990, c. O-36, s.1.

[9] Including an embryo and a fertilized egg or ovum. *Health of Animals Act*, S.C. 1990, c. 21.

[10] The length of any portion of a journey without food or water is limited to 36 hours for horses and pigs, 72 hours for chicks that have just hatched, and 48 hours for cattle, sheep and goats unless they will reach their final destination in Canada within 52 hours. *Health of Animals Regulations*, S.O.R./91-525, s.148.

[11] By reason of infirmity, illness, injury, fatigue or any other cause. *Health of Animals Regulations*, S.O.R./91-525, s.138.

The *Criminal Code* of Canada also creates a number of criminal offences relating to the inhumane treatment of animals, which apply at all stages of the continuum including transportation.[12]

The presence of a federal statute in the legislative field does not prevent Ontario from regulating transportation within its boundaries as Alberta has recently done.

5.1.4 Licensing and Inspection

There is no requirement in any legislation that transporters of animals or meat and meat products obtain a special licence or registration for themselves or their vehicles. There are also no sanitation requirements for vehicles transporting animals in Ontario other than the federal animal transport requirements described above.

There are extensive powers under the *Health of Animals Act*[13] for inspectors to conduct inspections of vehicles and animals, seize and detain animals, obtain warrants for searches, and conduct searches. However, these powers can only be used by persons designated as inspectors under the *Health of Animals Act* and Ministry of Agriculture and Food (OMAF) and OSPCA inspectors are not so designated.

CFIA inspectors can conduct inspections on demand to ensure that vehicles used to transport livestock comply with the requirements set out in the *Health of Animals Act* and its regulation and that the health and welfare of animals being transported are appropriately protected.[14] OSCPA inspectors can also inspect transport vehicles and the animals contained in any vehicles, but only for the limited purpose of addressing the condition of the animals and can only take steps to protect animals that they observe, or reasonably believe, are in distress.[15]

In the normal course, transport vehicles are only inspected at community sales barns and abattoirs. Currently, there are insufficient resources available to CFIA and there is no authority for OSPCA or the OMAF inspectors to conduct inspections on highways.

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[12] *Criminal Code*, R.S.C. 1985, c.46, ss.429, 444, and 446.
[13] *Health of Animals Act*, S.C. 1990, c. 21.
[14] *Ibid.*, s. 38 and *Health of Animals Regulations*, *supra* note 11, s. 137.
[15] *Supra* note 7. See note 8 regarding definition of distress.

Several stakeholders contended that the rules regarding transportation of animals need to be strengthened and complained that enforcement was poor. The issue was raised primarily with respect to the transportation of non-ambulatory animals which I will address in a subsequent Chapter.

There is little data on transportation, in terms of number of trucks, number of accidents, and problems arising in transport, due to the lack of regulation, records and provincial inspections. The lack of information is, in itself, a concern. Without sufficient information regarding this stage of the meat production continuum, an effective system cannot be designed to properly prevent, minimize and respond to the risks associated with transportation.

5.1.5 Training, HACCP and Biosecurity

There is no requirement for training, HACCP-based plans or biosecurity plans in order to transport animals or meat or meat products in Ontario. There are no HACCP plans developed by government or industry at present for transporters of livestock.

There is no requirement for courses on the handling of animals nor methods of transport for persons who transport animals in Ontario. Although recommended codes of practice for the care and handling of farm animals have been developed by various industry groups and governmental agencies across Canada,[16] I am not aware of any training programs on safe handling and transport for transporters of animals or meat and meat products in Ontario.

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[16] Codes of Practice exist for poultry, pigs, veal calves, ranched mink, ranched fox, dairy cattle, beef cattle, sheep, farmed deer, horses, transportation and bison. The codes are designed to be used as an educational tool in the promotion of acceptable management in welfare practices. Ontario Farm Animal Council, Brochure, *Preventing and Handling Non-Ambulatory Livestock on the Farm*; Canadian Agri-Food Research Council, *Recommended Code of Practice for the Care and Handling of Farm Animals: Transportation* (2001); Ontario, *Veterinary Guidelines for Transporting Compromised Cattle, Sheep and Goats* (February 2002); Ontario, *Caring for Compromised Pigs Assessing Animals at Risk* (March 2003); Ontario Pork, *On-Farm Euthanasia of Swine Options for the Producer*, Alberta Agriculture, *The Beef Cow-Calf Manual* (Revised 1989); T. Seidle, Canadian Federation of Humane Societies and the Canadian Agri-Food Research Council, *AP101: A Briefing Manual for CFHS Representatives on CCAC Assessment Panels* (Summer 2001).

Some producer groups are starting to require HACCP-based plans and records be maintained and accompany the animals.

There are biosecurity risks associated with the transport of livestock as the vehicles pick up animals, dirt and other materials from one location and carry them to other locations in the province and beyond. These vehicles can literally become carriers of disease.

I recommend that the Ministry of Agriculture and Food work with industry groups and transporters to develop training on the handling of animals in transport, the handling of meat products in transport, and to develop and implement HACCP-based and biosecurity plans for transporters. Consideration should be given to making these plans mandatory for commercial transporters within five years.

5.1.6 Disease Surveillance and Testing

There is no routine testing of animals during transport in Ontario by either federal or provincial authorities and there is only limited authority in provincial legislation to permit any testing of animals in transport.

Under the *Health of Animals Act*,[17] CFIA inspectors are permitted to test animals in transport and the *Health Protection and Promotion Act*[18] gives public health inspectors the authority to seize and test items where they have a reasonable belief that there may be a risk of harm to the health of any person. Although OMAF inspectors have no jurisdiction to test animals in transport, they do have authority under the *Livestock and Livestock Products Act* to test certain species that they believe are contaminated.[19]

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[17] *Health of Animals Act*, *supra* note 13, and *Health of Animals Regulations*, *supra* see note 11, s. 137.

[18] *Health Protection and Promotion Act*, R.S.O. 1990, c. H-7, s. 19.

[19] Containing or having been treated with a substance prohibited or in excess of limits prescribed under the *Food and Drugs Act*, R.S.C. 1985, c. F-27; *Canadian Environmental Protection Act, 1999*, S.C. 1999, c. 33; *Pest Control Products Act*, R.S.C. 1985, c. P-9, an ingredient, food additive or any source of ionizing radiation not permitted by or in an amount in excess as prescribed by the *Food and Drugs Act*, R.S.C. 1985, c. F-27; *Livestock and Livestock Products Act*, R.S.O. 1990, c. L-20, s. 12 and O. Reg. 318/99, s. 3.

5.1.7 Traceability

There is no requirement in Ontario or federal legislation for transporters of livestock to use standardized way bills or manifests or to keep records with information which would permit the tracing of each group of animals. Although some transporters do keep records which would be helpful in tracking animals, many do not.

Earlier in this Report, I suggested the development of a traceability system for meat throughout the food continuum which would include transport. Sufficient information should be collected and retained for animals and meat and meat products to facilitate food recalls and foodborne illness investigations.

I recommend that the regulations under the *Food Safety and Quality Act, 2001* require standardized forms and record keeping for the transport of animals, meat and meat products pending implementation of the recommended traceability program.

5.1.8 Other Jurisdictions

5.1.8.1 Alberta

Alberta is the only province with a regulation devoted to requirements for the transport of healthy animals.

The *Livestock Transportation Regulation* under the *Livestock and Livestock Products Act*[20] sets out requirements for the loading, unloading and transport of animals that are, in most respects, the equivalent of those in the federal *Health of Animals Regulation* except for air and sea travel, which have no intraprovincial application. The enforcement of the transportation regulation is delegated to the Alberta Society for the Prevention of Cruelty to Animals which receives funding from the Alberta government.

In addition, livestock being transported are required to be accompanied by either a livestock manifest or a livestock permit, with some limited exceptions. All of the manifests and permits are compiled and entered into a computerized database which permits tracing of cattle movements and sales. The information includes ownership, when the animals were bought or sold, where the animals originated and their movements. Alberta's livestock manifests include a feed and veterinary drug declaration that requires sellers to declare that the animals have not been fed any materials prohibited under the *Health of Animals Act* and that drug withdrawal times have been followed.

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[20] *Livestock Transportation Regulation*, Alberta Reg. 22\99 under the *Livestock and Livestock Products Act*, R.S.A. 2000. c. L-18.

In Alberta, there are courses offered for livestock truckers, auction markets, feedlot personnel, and producers on a variety of handling and transportation issues. Alberta is also working on a uniform livestock transportation code of practice.

5.1.8.2 European Union

The current regime for transportation of animals in the European Union (EU) was agreed to in 1995 and implemented in 1997. The requirements include transporters' authorization and training, maximum journey times and resting, and feeding and watering intervals for horses and farmed animal species. The requirements are more stringent than in Canada, particularly with respect to the amount of travel permitted between resting, watering and feeding. In December 2000, the European Commission published a report on the experience of EU member states in implementing those requirements. The report noted that there was evidence of a lack of commitment to enforcement, poor coordination and significant non-compliance, which included poor vehicle standards, poor handling, poor ventilation controls, overloading, transporting unfit animals and regularly disregarding journey times and route plans.[21]

The European Commission has adopted a proposal for a regulation which would significantly change the rules regarding animal transport. The changes would include banning the transport of animals deemed unfit and prohibiting transport for more than nine hours without a rest stop.[22] At present, the rules permit journeys to continue for up to 29 hours without a break.

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[21] European Commission, *Report form the Commission to the Council and the European Parliament* (Brussels: EC, 6 December 2000).

[22] An unfit animal would be one that is injured or presents with physiological weaknesses or pathological processes including those that are unable to move independently without pain or walk unassisted, those with severe open wounds and those with prolapses.

On April 1, 2004, the European Commission introduced a new information technology system which is web-based to improve the management of the movements of animals and animal products. The system is designed to replace the former paperwork and includes a single central database to track the movement of animals and certain types of products with a system of electronic veterinary certificates. It will permit tracking of the 50,000 animals transported into the EU each day.[23]

The European Food Safety Authority's Scientific Panel on Animal Health and Welfare provided an opinion recently on a request from the Commission regarding the welfare of animals during transport.[24] The panel's opinion was that a variety of stressors involved in transport are key factors that lead to poor animal welfare, increased susceptibility to infection and increased shedding of infectious agents in already infected animals. As a result, the panel recommended that all stressful conditions should be minimized. Since the transportation of livestock, birds and fish can spread both animal and zoonotic diseases, the panel suggested that clinical inspection before transport and biosecurity measures including cleaning and disinfection of transport vehicles are important measures to prevent the spread of infectious diseases. The panel concluded that all persons responsible for animal transport should be properly trained and that animals which are unfit for transport should be humanely euthanized.

5.1.9 Enforcement and Compliance

There is currently no authority in any Ontario statute to stop a vehicle for routine animal or meat inspection. Inspections are not being conducted on the highways or roads of Ontario, except to the extent that an inspector may be enforcing the *Livestock and Livestock Products Act* and attempting to determine whether a livestock dealer is properly licensed or the livestock being sold is contaminated.[25]

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[23] European Commission, Press Release, *TRACES: Commission adopts new system to manage animal movements and prevent the spread of animal diseases* (15 April 2004).

[24] European Food Safety Authority, *Opinion of the Scientific Panel on Animal Health and Welfare on a request from the Commission related to the welfare of animals during transport* (Adopted on 30 March 2004).

At present, the CFIA has jurisdiction to enforce the transportation requirements in the *Health of Animals Regulations*. CFIA veterinarians have no authority to euthanize animals in distress, but can euthanize if the animal is diseased. There were concerns expressed during the course of the Review that there was not enough being done to enforce the transportation regulations because Ontario inspectors have limited authority to deal with these issues. For example, when transportation issues arise at provincial plants and sales barns, in the absence of CFIA inspectors, there are only limited responses available to the provincial inspectors.

Proclamation of the *Food Safety and Quality Act, 2001* (*FSQA*)[26] and the promulgation of supporting regulations should remedy those shortcomings in enforcement, but will not necessarily address all meat safety and animal welfare concerns that have been identified with the transportation of livestock.

I recommend the provincial government make regulations for the transport of animals under the *Food Safety and Quality Act, 2001* that are comparable to the *Livestock Transportation Regulation* in Alberta.

5.2 Livestock Community Sales

5.2.1 Introduction

There are approximately 30,000 livestock farms in Ontario and 224 abattoirs (33 federal and 191 provincial). Animals slaughtered for human consumption typically fall into one of three categories: animals brought to the abattoirs for custom slaughter; animals raised by and for the abattoir operation itself; and animals purchased from producers by abattoirs through direct sale or public auction.

There are 42 community livestock sales operations in Ontario which offer livestock for sale at public auctions held at facilities known as "auction markets" or "sales barns."[27] In the normal course, animals are transported to these facilities, sold by auction and then transported from the sales barn to the abattoir for slaughter.

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[25] *Livestock and Livestock Products Act*, R.S.O. 1990, c. L-20, s. 12.

[26] S.O. 2001, c. 20.

Livestock community sales in Ontario vary in size, species and types of livestock sold and the frequency with which they are held. Some of the facilities have only one building with a single auction ring, while others have many buildings and several auction rings. The species sold at sales barns include cattle, horses, sheep, lambs, goats, swine, rabbits, ducks, pigeons and other poultry. Within each species, the animals vary in size and age.[28] Some sales barns hold auction sales less than once per week and others as often as five days per week.

The system of inspection at livestock auction markets in Ontario provides an important layer of protection in the food safety system.

5.2.2 Food Safety Issues

I was told that the original purpose for livestock community sales was the sale of purebred animals. Times have changed. It is apparent from my tours of two sales barns that they are now used for a broad range of sales, including the sale of cull animals. These are milk producers or breeders which are no longer achieving the desired level of production and as a result, are being cut from the herd and sold for slaughter. Cull animals are older and have a higher incidence of health problems. As a result, their assembly at sales barns increases the risk of the transmission of diseases or pathogens. About 125,000 cull cows and bulls are marketed at sales barns in Ontario each year. Inspections at livestock community sales can identify unhealthy animals before they have travelled further into the system and potentially contaminated or infected other animals or humans.

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[27] Although most are conducted in person, some livestock sales are conducted electronically. See Ontario Livestock Exchange Incorporated, *About OLEX – TEAM*, available from http://www.olex.on.ca/Olex/Default.asp [accessed 1 June 2004].

[28] The types of livestock sold include commercial beef cows, commercial beef calves, springing heifers, open heifers, bred heifers, bred cows, breeder bulls, fed cattle, cull cows, slaughter cows, finished cattle, veal, bob calves, stockers, yearlings, weaner pigs, bred sows, bred boars, cull ewes, bred ewes, cull rams, baby kids, feeder kids, market kids, cull nannies, cull billies, dairy nannies, dwarf rabbits, young rabbits, meat rabbits, buck rabbits, doe rabbits, homing pigeons, barn pigeons, rent pigeons, tumbler pigeons, king pigeons, fantail pigeons, old hens, laying hens, pullets/meat birds, roosters, banties, silkies, quail, young turkeys, mature turkeys, mature peafowl, golden pheasants and silver pheasants.

5.2.3 Legislative Structure

In Ontario, livestock community sales operations must abide by the *LCSA*[29] which was enacted in Ontario in order to have veterinarians monitor animal health at sales barns.[30] Public auction sales are prohibited from commencing until an inspector has inspected the facilities and found that the facilities meet the requirements of the *LCSA*.[31] There is also a prohibition against selling an animal at a public auction sale before it has been inspected.[32]

In 1985, amendments were made to the *LCSA* regulation to permit animal health inspections by non-veterinarian inspectors for the purpose of identifying suspect animals for further examination by veterinarians.[33] In November 1999, OMAF[34] announced that the government intended to change the program into a user-pay system in which the sales barns would pay for veterinary inspection costs. A new program was developed over the course of the next year and fully implemented in mid-2001. The industry now pays for most of the inspection which is undertaken by "lay inspectors" who are employees of the sales barns.[35]

The Ontario Cattlemen's Association (OCA) has contributed funding for the livestock community sales inspection program since 1986 through its check-off funds. Under the *Beef Cattle Marketing Act* (*BCMA*),[36] each person who sells cattle in Ontario must pay a licence fee of $2.25 for each head of cattle.[37] The fee or levy is sent to the OCA by the seller of the animal. The OCA also contributes to the salary of the weigh and trim inspector who is employed by OMAF and attends at sales barns to inspect and verify their scales and oversee the lay inspectors.[38]

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[29] *LCSA, supra* note 2.
[30] R.R.O. 1980, Reg. 586, s.11.
[31] *Ibid.*, ss. 12 and 14(1).
[32] *Ibid.*, s. 14(2).
[33] O.Reg.258/85.
[34] At that time known as Ontario Ministry of Agriculture and Food and Rural Affairs – OMAFRA.
[35] O.Reg. 47/01 added s. 3.1 to O. Reg. 729.
[36] *Beef Cattle Marketing Act*, R.S.O. 1990, c. B-5.
[37] R.R.O. 1990, Reg. 54, as amended by O. Reg. 291/96, ss.1 & 8.

Appointed veterinarians[39] attend each sale for a scheduled period of time to assess the health of the livestock and may re-attend, if called, to examine a suspect animal. The fees of the appointed veterinarians are paid by OMAF.

In the consultations prior to the enactment of the *FSQA*, OMAF indicated that that legislation was designed to modernize and consolidate the food safety and quality requirements of seven statutes. The *LCSA* is not one of the seven statutes. The intent of the *FSQA* is to promote a consistent science-based approach to food safety all along the farm to fork continuum and to provide the necessary enforcement tools to ensure compliance. The livestock community sales program is one of the stages in this continuum where food safety can be protected. For this reason, the *LCSA* should be brought under the *FSQA* umbrella.

I recommend that the *Livestock Community Sales Act* be incorporated into the *Food Safety and Quality Act, 2001* by way of regulation that would continue, but modernize the current livestock community sales program to match or exceed generally accepted standards for animal treatment.

5.2.4 Licensing

Livestock community sales operations involving the sale of cattle, goats, horses, sheep or swine, are required to be licensed under the *LCSA*.[40] There are three classes of licences with annual fees ranging from $300 to $1,500 depending on the number of sales held each week.[41]

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[38] Ontario Cattlemen's Association, *2004 Annual Report*, available from http://cattle.guelph.on.ca/communications/annual_report_04/ [accessed 11 May 2004].

[39] Appointed veterinarians are veterinarians under the *Veterinarians Act*, R.S.O. 1990, c. V-3 who are appointed as inspectors under the *LCSA*.

[40] *LCSA, supra* note 2, s. 3. Class I for sales not more than once per week ($300). Class II for sales not more than twice per week ($600). Class III for more than two sales per week ($1,500).

[41] R.R.O. 1990, Reg. 729, as amended by 47/01, ss. 1 & 3.

The licensing provisions of the *LCSA* are similar to the provisions under the *Meat Inspection Act* (Ontario).[42] If satisfied the applicant will meet with regulatory requirements, the Director of the Food Inspection Branch is required to issue a licence upon receipt of an application, and payment of the licence fee. Hearings can be held to determine whether to grant a licence as well as to suspend, revoke or not renew the licence.[43] Appeals from licensing hearings are to a statutory tribunal.[44] I am not aware of any hearings or appeals from licensing decisions from 1991 to April 2004 involving any issue related to food safety or the humane treatment of animals.

5.2.5 Inspection

There are approximately 80 lay inspectors in Ontario who are responsible for most of the inspection of the facilities licensed under the *LCSA*. Although initial training of lay inspectors was completed by OMAF in 2001, there have been no formal training sessions for them since that time.

Lay inspectors are required to observe all animals presented at the sale and to segregate, for veterinary inspection, any abnormal stock they identify. These inspectors also inspect the sales facilities to ensure the premises, including the unloading area and auction ring, are in proper condition. They are expected to ensure the pens are not overcrowded, that different livestock species are segregated, that adequate ventilation and temperature control is maintained and that clean water is provided to all livestock within a reasonable time.

When an animal with an abnormal condition is identified and brought to the attention of the appointed veterinarian, that veterinarian may require that the animal be returned to the consignor if the animal is in an active stage of disease process and, if sold, could spread that disease. The veterinarian can also designate an animal "for slaughter only" where the animal is not in an active infective state and deemed suitable for slaughter. Should an animal be so designated, it must be marked accordingly, can only be purchased by a licensed dealer who operates a slaughter plant and may be designated for slaughter within a specified time frame. In circumstances where the veterinarian determines that the animal is not capable of being cured or healed, the veterinarian may order that the animal be euthanized.[45]

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[42] *LCSA, supra* note 2, ss.4 & 5.
[43] *Ibid.*
[44] *Ibid.*, s. 9.

Lay inspectors and appointed veterinarians are expected to fill out a report of their activities for each day of the sales and forward it to OMAF. From my review of a sampling of these reports, it appears that they are not consistently and fully completed.

The weigh and trim inspector is the only full time OMAF employee working in the livestock community sales program. That inspector attends at the sales barns on a rotating basis, examines the facilities, observes the performance of the lay inspectors, reviews the health of the animals present, and reviews the treatment and handling of those animals. The weigh and trim inspector attends at each sales barn approximately once every six weeks, although the frequency depends on a number of factors including, season, size of sales barns, frequency of sales at the sales barns, complexity of sales, and location of the sales barns. The inspector reported that, from 2000 through the end of 2003, 134 to 152 inspections of sales barns were completed requiring between 48,000 and 57,000 kilometres of travel each year.

One of the two regional veterinarians in Ontario and the program manager at OMAF oversee the operation of the livestock community sales program. The level of day-to-day government oversight of the lay inspectors and appointed veterinarians is far from ideal.

There is a conflict in the role of the lay inspectors because the proper performance of their duties can have an adverse impact on the operators of the sales barns who employ them. Suspect animals and those marked for direct transport to slaughter bring less at auction and, therefore, less return for the operator. Also, any report of the inspector that identifies inadequacies in the facility could ultimately jeopardize the employer's licence. Concerns were expressed to me by enough people associated with community livestock sales to warrant some remedial action. In my view, the inspection program at sales barns is a useful barrier in the food safety system, but if it is to be meaningful, the program needs to be strengthened. I believe this can be accomplished with more oversight.

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[45] *Ibid.*, s. 16(3)(d) and R.R.O. 1990, Reg.729, as amended by 47/01, s.12.

I recommend that the existing livestock community sales program be strengthened with increased oversight of the lay inspectors and appointed veterinarians by an increased complement of Ministry of Agriculture and Food inspectors with responsibilities for monitoring the sales barn program.

5.2.6 Audit

In 1995, the Food Inspection Branch of OMAF started conducting annual audits of the sales barns to determine whether the structure, equipment, practices and operation of the sales barns are in compliance with the regulations under the *LCSA*. The audits cover five main areas – animal disease control, animal handling, inspection, sanitation and environment.

A standards of compliance manual was developed and distributed to operators in 1995 and later amended in July 2002 which lists the standards to be met by the sales barns. Each item in the *LCSA* regulation is restated as a standard designed to be assessed in a precise manner. The weigh and trim inspector who conducts the audits sends a letter to the sales barn operators and meets with them after the audit is completed to provide a summary of his observations and the overall rating. The rating after an audit is a letter grade from "AAA" to "F," similar to the audit rating system for abattoirs. If there are any items of non-compliance, a due date by which the deficiencies must be corrected is set by the auditor after consultation with the sales barn operator.

None of the licensed sales markets in Ontario have been rated lower than "B" since 2000, although the audit reports list ongoing deficiencies at many livestock sales barns from year to year. These delays in compliance should be addressed and eliminated.

5.2.7 HACCP

There is no mandatory HACCP or HACCP-based program requirement for livestock community sales and no such programs that are specific to the livestock community sales operations have been developed by OMAF or the industry.

5.2.8 Traceability

There is no system in place for tracing the origin, path and health of livestock arriving at livestock community sales. Cattle and sheep are required to have ear tags as part of a national identification system. The tags are to be applied to the ear of each animal before the animals leave the farm of origin, however, some cattle tags are being applied at the livestock community sales facilities. The tag numbers are recorded and then deleted from the system when the tags are collected at slaughter or deadstock collector/receiving plants. Not all tags are being collected. Tag identification only assists with tracing the animal back to its birth farm as information regarding the movements and health of the animal are not recorded with the tag number. If an animal became ill, it would take some time to trace its origins and movements. This delay heightens the risk of transmission of disease.

5.2.9 Biosecurity

Although the *LCSA* and its regulation require that every operator clean and disinfect the premises before receiving any livestock for the purpose of a community sale,[46] no biosecurity program is required nor has any been developed for livestock community sales by industry or OMAF.

There are biosecurity risks associated with livestock community sales as a significant number of livestock from many producers go through the same premises and in particular, the same stalls, loading docks, and auction rings. In addition, a substantial number of livestock trailers arrive and depart from the sales barn around the time of a sale. Standard biosecurity measures, such as sprays or washes for the boots of people at the sales barns, registration of persons attending the sales barns for the trace back of any cross-contamination or contamination discovered, or washing or sanitation of trucks or truck wheels are not in place and should be put into effect.

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[46] R.R.O. 1990, Reg.729, as amended by 47/01, s.10.

5.2.10 Disease Surveillance and Testing

There is no testing of animals at the sales barns, although the animals may be tested at abattoirs or deadstock receiving operations after they leave the sales barns.

5.2.11 Disposal

The euthanasia of fallen animals and disposal of dead animals must be conducted in accordance with the *Dead Animal Disposal Act*.[47] There are no significant animal carcass disposal issues specific to sales barns.

5.2.12 Other Jurisdictions

No other province in Canada has a comparable system for the inspection of livestock auctions and none have legislation that is as comprehensive as the *LCSA*. Only two other provinces have livestock community sales legislation,[48] however, these permit, but do not require inspection of animals and facilities.

5.2.13 Animal Welfare and Humane Handling

Although the provisions in the *LCSA* regarding animal welfare are minimal, all inspectors appointed under the *LCSA* are required to oversee the humane handling of animals at livestock community sales and any humane handling problems are supposed to be recorded in the daily sales report of the inspector.

In early 2004, a pilot project was set up in which four inspectors of the OSPCA were appointed as inspectors under the *LCSA*. These inspectors have been travelling to various sales barns across the province to ensure compliance with the *LCSA* and the OSPCA's legislation.

In addition to the increased level of inspection that the OSPCA inspectors provide to the livestock community sales program, they, under their enabling *Act*, also have authority to attend at farm properties or feedlots to address animal welfare problems on those premises. The pilot program is in place until the summer of 2004 at which time it will be reviewed to determine whether it should continue. In my view, this is a worthwhile initiative. It gives the OSPCA inspectors access to sites where animal welfare issues are a concern and provides OMAF with additional surveillance capacity to oversee on-farm compliance as well as adherence to the regulations at sales barns.

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[47] *Dead Animal Disposal Act*, R.S.O. 1990, c. D-3.

[48] Prince Edward Island, *Livestock Community Auction Sales Act*, R.S.P.E.I. 1988, c. L.16 and British Columbia, *Livestock Public Sales Act*, R.S.B.C. 1996, c. 274.

I recommend the continued participation of the Ontario Society for the Prevention of Cruelty to Animals in the livestock sales barn program.

I was advised, during the Review, that the appointed veterinarians do not always have access to the tools necessary to humanely euthanize an animal. The generally accepted method is the captive bolt pistol. There are, at present, approximately 50 veterinarians, from 22 different clinics, who work part-time as appointed veterinarian inspectors at the livestock auction markets. The OSPCA estimates that half or more of those veterinarians do not have access to a captive bolt pistol. Most veterinarians are used to euthanizing animals by using chemicals, however, those chemicals, if used to euthanize a large animal, make the animal carcass unacceptable to a rendering operation and thereby limit the disposal options for the carcass.

I recommend that a captive bolt pistol be kept on-site and available at all sales barns for use by the appointed veterinarians.

Since March 2001, lay inspectors have been able to tag animals with potential health problems to be sold direct to slaughter instead of having the animals examined by a veterinarian.[49] This creates a risk of transmission of disease beyond the sales barn and should be discontinued.

I recommend that regulations require that any animal with a suspected health problem at a sales barn be referred for examination and disposition by a veterinarian.

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[49] R.R.O. 1990, Reg.729, as amended by O.Reg. 47/01, s.11(4).

5.2.14 Non-Ambulatory Animals

The regulation under the *LCSA* contains provisions specific to non-ambulatory animals (also called downer animals). If a veterinary inspector, after examination, finds an animal to be non-ambulatory, the inspector must issue a certificate for direct transport to slaughter or release the livestock to the operator who is to arrange for the animal to receive the immediate care of a veterinarian.[50] If any *LCSA* inspector finds a non-ambulatory animal on a vehicle, the inspector must detain the animal and the vehicle must not then be moved unless a veterinarian issues a certificate for direct transport to slaughter or releases the animal to the driver who shall arrange for the animal to receive the immediate care of a veterinarian.[51]

A further discussion relating to animal welfare and food safety issues that arise with respect to non-ambulatory animals can be found in Chapter 6 where I make recommendations for their transport and disposition.

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[50] *Ibid.*, s.12.
[51] *Ibid.*, s.17.1.

Chapter 6 - Abattoirs **231**

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Chapter 6 - Abattoirs

6.1 Introduction

Provincially licensed and inspected animal slaughter plants (also known as abattoirs) are the primary focus of the present meat inspection and regulatory regime in Ontario.

Live animals arrive at the abattoirs where they are unloaded, assembled, stunned, slaughtered, eviscerated and dressed and the meat harvested. All of these steps are inspected by government employed and trained meat inspectors. Some abattoirs also process the meat from the carcasses after slaughter. I will address the processing of meat stage in a later Chapter.

Ontario has had a system of regulation and government inspection of abattoirs for many years and has implemented many steps to address hazards at the slaughter stage. However, there are additional measures that can be taken to ensure that Ontarians have a system capable of ensuring that any risks associated with the production of meat are negligible.

6.2 Food Safety Issues at Abattoirs

The abattoir is a critical stage in the meat production continuum as it presents some of the best opportunities for contamination. The hazards to health that can be caused by consumption of meat have been discussed earlier in this Report. Generally speaking, biological, chemical and physical contaminants can all be encountered at an abattoir. The manner in which animals are slaughtered, eviscerated, dressed[1] and stored can affect the growth of pathogens and the potential for contamination of the meat by dirt, feces or other materials from animals, equipment and premises. The lack of hygienic practices by plant workers can also contaminate the carcasses or cause cross-contamination between different carcasses.

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[1] The term "dress" is used to refer to the process of cleaning and preparing the meat of the carcass for cooking or selling. The process involves different steps for different species, but can include to split, eviscerate and remove the skin, feathers or hide, head, and feet of the carcass. The term "eviscerate" is used to refer to the removal of the internal organs or entrails of an animal. Both terms are given specific definitions in the regulations under the *Meat Inspection Act* (Ontario). See O.Reg. 632/92, amended to O. Reg. 319/99, s.1.

Inspection of live animals, carcasses and meat at abattoirs, including examination and testing, can assess potential risks and, where necessary, permit steps to be taken to reduce or eliminate those risks. Testing can determine chemical residues, pathogen levels and the presence of some diseases. The examinations of the live animal prior to slaughter (*ante mortem*) and the carcass of the animal and its organs after slaughter (*post mortem)* permit the inspector to assess the health of the animal and the wholesomeness of the meat. Given the substantial number of farms having animals slaughtered at 224 federal and provincial abattoirs, inspection at this stage provides a vital opportunity to identify and address risks arising not only from slaughtering activities, but also from unhealthy animals.

6.3 History of Abattoir Inspection in Ontario

Some inspection of abattoirs has been conducted in Ontario for over a century.

6.3.1 Public Health Inspection at Abattoirs

Until 1960, public health agencies in Ontario had sole responsibility for abattoir inspection and meat safety in order to protect public health. From before 1900 until 1983, municipalities were permitted to have their Board of Health inspect the premises, animals, carcasses and meat intended for human food at both public and private abattoirs. Public health inspectors could inspect, and when required to protect public health, seize and destroy meat or animals sold for human consumption.[2] Public health legislation from 1957 to 1993 set out specific standards for abattoirs.[3] Inspections by public health inspectors, primarily of processing and retail areas within abattoirs, continued until 1993.[4]

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[2] *Inspection of Meat and Milk Supplies of Cities and Towns Act (Ontario), 1896, Municipal Amendment Act*, 1896, 59 Vict. C. 51, s. 30; *Public Health Act* R.S.O. 1950, c. 306, ss. 114-115, 119-121; *Public Health Act*, R.S.O. 1980, c. 409, ss. 145-147 and Sch. B, ss.8, 9, and 11; *Public Health Act*, (1912), 2 Geo. V. c.58, Sch. B, ss. 8, 9 and 11; *Public Health Act*, R.S.O., 1897, c. 248, ss. 108-109.

[3] *Slaughterhouses and Meat Processing Plants*, O. Reg.193/57 and O. Reg. 293/84.

[4] In 1993, shortly after the *MIA* regulation was revised to authorize OMAF inspectors to inspect and ensure the safety of meat processing at abattoirs, the regulation under the *HPPA* dealing with the inspection of abattoirs and meat processing plants was revoked and health units stopped conducting routine inspections of meat processing plants on the same premises as abattoirs. *Slaughterhouses and Meat Processing Plants*, R.R.O. 1990, Reg. 571.

Today, Boards of Health have the authority and responsibility to promote and protect public health. These obligations extend to all food premises, including processing and retail premises at abattoirs.[5] I was advised during the course of this Review that public health inspectors do not regularly attend at abattoirs because they have been routinely inspected by Ministry of Agriculture and Food (OMAF) meat inspectors since 1993.

6.3.2 Ministry of Agriculture and Food Inspection at Abattoirs

In 1906, the novel *The Jungle*, by Upton Sinclair, was published. The novel graphically described the horrifying working conditions and processing practices of abattoirs in Chicago and produced a public outcry for reforms in the industry. Shortly thereafter, legislation was enacted in the United States (U.S.) extending the scope of federal meat inspection.[6] The next year, legislation was enacted in Canada to require inspection at abattoirs processing meat for export or sale interprovincially.[7]

In 1962, there were a number of news reports about the sale of meat from dead animals and the sale of meat with abscesses in Ontario.[8] In December 1962, the *Meat Inspection Act* (Ontario) (*MIA*) received royal assent. It required inspection at abattoirs in Ontario which processed meat for consumption in Ontario. However, mandatory inspection did not commence until April 1, 1967 and was initially only implemented in certain counties. More were added and by the end of 1969, inspection was mandatory throughout the province.[9] The *MIA* permitted several exemptions from inspection including meat harvested from animals slaughtered on-farm for sale ("farm gate sales") or for personal consumption or within a cooperative and poultry slaughtered to be sold as undrawn dressed poultry.

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[5] *Health Protection and Promotion Act*, R.S.O. 1990, c. H-7, s.2 and R.R.O. 1990, Reg.562, as amended and every medical officer of health and public health inspector is an inspector under the *MIA*, R.S.O. 1990, c. M-5, s.15.

[6] *Pure Food and Drug Act* and the *Meat Inspection Act* both passed in 1906.

[7] *The Meat and Canned Goods Act* (Canada) assented to April 27, 1907.

[8] The Globe and Mail, February 2, 1962 and February 8, 1968 and I. MacLachlan, *Kill and Chill: Restructuring Canada's Beef Commodity Chain*, (Toronto: University of Toronto Press 2001).

[9] O. Reg. 20/65, s. 3(1) and the Commencement of Mandatory Meat Inspection in Ontario Chart, Appendix H and O.Reg.106/67, 378/67, 8/68, 84/69, and 275/70.

In an effort to improve meat safety in Ontario, a number of legislative changes have ensued to remove or restrict several exemptions and many refinements of the inspection program have been introduced. The inspection of poultry by OMAF inspectors commenced in 1982. The exemptions for farm gate sales and undrawn undressed poultry were removed in 1992. In addition, the regulations under the *MIA* were amended to increase the powers of inspection to include processing of meat after slaughter (further processing) and to add standards for the conduct of slaughter and processing of meat.[10] At that time, OMAF introduced a capital assistance program to help abattoirs upgrade to comply with new standards.[11] There have been no significant changes to the *MIA* regulations since 1992.

6.4 Ontario Legislation Affecting Abattoirs

The primary statute in Ontario governing meat production at abattoirs is the *MIA*. Its purpose is to provide for the safe production of meat for human consumption. The *MIA* applies to all meat from domestic animals and poultry sold within Ontario unless it has been inspected under the *Meat Inspection Act* (Canada).

Subject to limited exceptions, the *MIA* and its regulations require that the slaughter of any domestic animals and poultry for the production of meat for human consumption be undertaken in a prescribed, humane manner at a facility licensed for that purpose with an inspector present to conduct a *post mortem* examination. The slaughter of an animal is prohibited unless the animal was inspected and approved for slaughter immediately before the time of slaughter (*ante mortem*). There are only two exemptions from these requirements – slaughter on-farm by the producer for consumption by that producer or his or her immediate family and plants which conduct the custom slaughter of poultry.[12] The regulations under the *MIA* specify the facilities and equipment required and the rules for the operation and maintenance of plants at which animals are slaughtered, to ensure that safe production standards are met.

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[10] O. Reg. 632/92, filed October 16, 1992.

[11] The Abattoir Capital Assistance Program in 1992 and 1993 provided up to a maximum of $5,000 for a custom poultry slaughtering plant or $20,000 for other abattoirs. The program was designed to assist the industry to meet the new standards.

[12] The custom plants slaughter poultry for producers and return the poultry back to producers for consumption by that producer or the producer's immediate family. The poultry cannot be sold to the public. The plant must meet all of the typical sanitation, equipment and construction standards.

No meat can be offered for sale unless it is stamped with an inspection legend and properly labelled. An inspector may refuse to provide inspection and refuse to stamp or label meat or meat products if an operator fails to comply with the *MIA* and its regulations. The *MIA* also provides that it is an offence punishable by fine, imprisonment or both to contravene any provisions of it or its regulations. The issues relating to enforcement will be dealt with in Chapter 11.

There are a number of other statutes which regulate the meat production industry and impact abattoirs, however, most of these statutes primarily deal with marketing, fraud or other industry or quality issues specifically, and, therefore, they will not be addressed in this Chapter.[13]

The *Food Safety and Quality Act, 2001*[14] (*FSQA*) is intended to replace the *MIA*.

6.5 Abattoir Licensing in Ontario

Under the *MIA*, businesses operating premises where domestic animals and poultry are slaughtered are required to be licensed under the *MIA* or the *Meat Inspection Act* (Canada).[15]

A licence will be issued by the Director of the Food Inspection Branch of OMAF under the *MIA* where an applicant demonstrates that the premises, facilities and equipment used in the business comply with the *MIA* and its regulations and pays a licence fee of $52.50.[16] OMAF requires that plants submit or update a business plan each year at licence renewal which includes contact information and the species of animals slaughtered at the plant. As of April 2004, there were 191 provincially licensed abattoirs and 33 federally registered abattoirs in Ontario.

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[13] *Farm Products Grades and Sales Act* and *Canadian Agriculture Products Act* deal with grading of beef and veal. *Beef Cattle Marketing Act*, *Livestock and Livestock Products Act*, *Farm Products Marketing Act*, and *Agricultural Products Marketing Act* deal with the marketing and sale of animals and meat products.

[14] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20. See Chapter 2.

[15] R.S.O. 1990, c. M.5, ss.1 & 3. In the federal system, the slaughter plants are "registered" instead of licensed and called "establishments" instead of plants or abattoirs. I will not use the federal terminology in this Report.

[16] *Ibid.*, ss.4 & 5.

As shown in the chart below, the number of provincially licensed abattoirs has been decreasing over the last few years, which has caused concern and difficulty for producers who use their services.

The Number of Distinct Plant Licences Issued under the *Meat Inspection Act* (Ontario) - APRIL 1998 to APRIL 2004

Year	Number of Abattoirs	Number of Custom Killing of Poultry Plants
1998 - 1999	267	0
1999 - 2000	282	7
2000 - 2001	231	4
2001 - 2002	226	3
2002 - 2003	217	3
2003 - 2004	202	1
2004 - 2005	191	0

Failure to operate an abattoir in accordance with the provisions of the *MIA* and its regulations may result in charges or regulatory actions such as suspension, revocation of or refusal to renew the licence. Any regulatory actions can be challenged in a hearing before the Director of the Food Inspection Branch from which an appeal can be taken to the Agriculture Food and Rural Affairs Tribunal.[17]

The existing licence fee was implemented in the early 1990s and designed to cover the administrative costs of issuing licences. The fee has not kept pace with costs. Abattoirs are allocated a pool of inspection hours each year and are provided with inspection service for hours of slaughter and limited hours of further processing inspection without additional charge. The number of hours of slaughter inspection provided to an abattoir without charge each year is based on its production volume, its historical inspection requirements, and the efficiency of the abattoir. The abattoirs do not contribute to the cost of the inspection system apart from payment for any inspection hours requested beyond those allocated. In the federal system, the federally registered abattoirs are required to pay fees that amount to approximately 14 percent of the inspection costs.[18]

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[17] *Ibid.*, ss.5-8.

The current licence fee is too low and does not cover the administrative costs. The meat inspection system benefits the public by ensuring the delivery of safe meat. However, the abattoirs also benefit to the extent the system assists them in producing a safe product and maintaining consumer confidence in their product. I believe that the provincial government should continue to bear the bulk of the costs of the inspection program, however, the licence fee should be increased to cover all of the administrative costs and to include some contribution by the abattoirs toward the cost of inspection. To ensure that each plant pays a proportionately fair fee, the amount should be based on production volume and take into account the relative volumes between different species.[19] I would suggest a number of categories of fees, with incremental increases in the fee commencing at $500 and going up to $5,000.

I recommend that the licence fee for the provincially licensed abattoirs be increased substantially and be based on the production volume of the particular plant.

6.6 Abattoir Inspection and Audit

6.6.1 Delivery of Meat Inspection

6.6.1.1 Introduction

The delivery of abattoir inspection in Ontario by OMAF involves many personnel, most of whom are Ministry staff or management. In addition to the Ministry staff or management, auditors and veterinarians are hired on a contract basis to provide professional services to the inspection program. Meat inspection operations are overseen by the Director of the Food Inspection Branch of OMAF.

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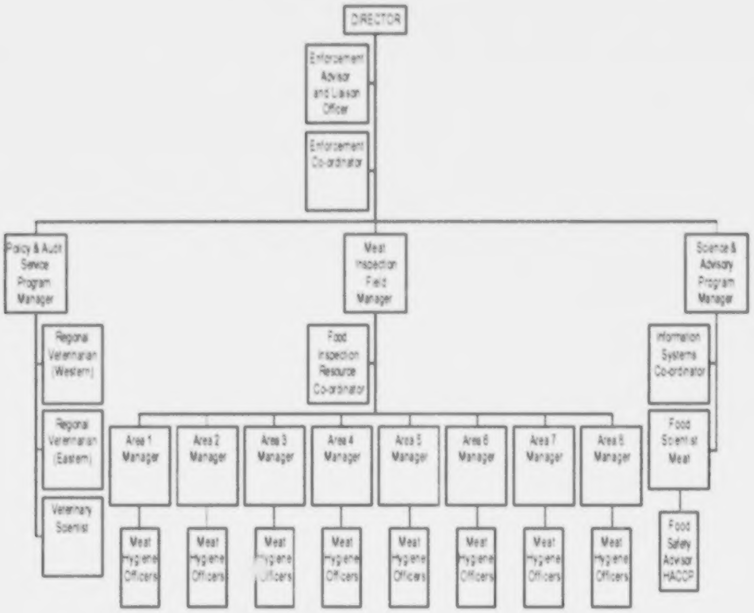
[18] See www.inspection.gc.ca/english/reg/appro/1998/meatriase.shtml and www.inspection.gc.ca/english/prog/comm/impacte.shtml#macro

[19] For example, an abattoir that slaughters 2,000 head of cattle per year should pay about the same amount per head of cattle as a plant which slaughters only 100 cattle per year. Similarly, a poultry plant that slaughters 1,000 chickens in the time that approximately 100 cattle are slaughtered should pay an amount that relates to the inspection time required by the slaughter volume and species.

The Ministry staff and management that operate under his direction are set out in the organizational chart below:

Meat Inspection Operations



6.6.1.2 Meat Hygiene Officers

Meat inspectors are now known as meat hygiene officers.[20] Their purpose is to provide *ante* and *post mortem* meat inspection services at plants licensed under the *MIA* and to ensure compliance with the provisions of that legislation and its regulations.

In conducting *ante mortem* inspections, inspectors approve normal animals for slaughter while identifying and referring abnormal animals for veterinary consultation. The inspectors supervise the slaughter of animals and the sanitary dressing of carcasses to ensure they are carried out in accordance with food safety and animal welfare legislation. Veterinary consultation is also sought if abnormalities are identified during *post mortem* examination. The additional duties of inspectors include:

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[20] Although they are identified as inspectors in the *MIA* and *FSQA*, I use "meat inspectors" and "meat hygiene officers" interchangeably in this Report. The descriptions of the duties of meat hygiene officers and the other personnel of the Food Inspection Branch that follow are primarily taken from job descriptions provided by OMAF.

- monitoring processing operations such as chilling, cutting and boning, packaging and labelling, storage and shipping;
- monitoring plant activities to ensure compliance with designated operational and food handling standards;
- reviewing and evaluating the operator's records relating to food safety programs in place at the plant; and,
- completing and maintaining a variety of electronic records in the Food Safety Decision Support System.[21]

Both the *ante* and *post mortem* examinations conducted by inspectors are important to meat safety. Some animal diseases can only be identified on *ante mortem* examination. Other diseases can only be confirmed by tests conducted after the animal's death.

The meat inspectors are the primary line of defence in the delivery of the meat inspection and regulatory scheme at the abattoir stage as they conduct almost all of the day-to-day monitoring to verify adherence to the regulatory standards to ensure meat safety.

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[21] The Food Safety Decision Support System is the computer system implemented in 1999 by OMAF in which records are entered by staff and stored to be referred to and analyzed for the purposes of the meat inspection program.

6.6.1.3 Area Managers

The province is divided into eight areas for the provision of meat inspection services with a manager assigned to each area. In addition to their responsibility for the supervision of meat hygiene officers, area managers are required to:

- ensure the delivery of all food inspection programs relating to primary and further processing, drug residues, water quality, deadstock and the scheduling of hours for slaughter;
- consult with other Branch professionals (e.g., regional veterinarians and veterinary scientists) to resolve technical and scientific concerns that could impact on food safety and zoonotic diseases;
- collaborate with other agencies (e.g., Canadian Food Inspection Agency (CFIA) and local health units) in containing and controlling hazardous safety situations requiring food recalls or animal quarantines;
- provide technical advice to operators and assist with co-ordination of construction, renovation and repair projects; and
- advise and educate operators and the public on food safety programs and issues.

6.6.1.4 Meat Inspection Field Manager

The area managers report to the meat inspection field manager who is responsible for developing and co-ordinating strategies for the successful delivery of meat inspection programs throughout the province. The field manager also assists with the gathering of information relating to complaints of illegal activities and initiates referral to investigative support, program staff or area managers for further action.

6.6.1.5 Appointed Veterinarians

Appointed veterinarians are local veterinarians in private practice appointed by OMAF as veterinary inspectors to consult with meat hygiene officers who require the expertise of a veterinarian to address an inspection issue with respect to an abnormal animal or carcass. As of April 2004, there were 129 veterinarians appointed under the *MIA* and the *Livestock Community*

Sales Act who were hired on a fee-for-service basis as needed in the meat inspection program.

6.6.1.6 Regional Veterinarians

The regional veterinarians provide expert advice and support in one of two regions (eastern or western) of the province to meat hygiene officers, appointed veterinarians and plant operators. The regional veterinarians control and co-ordinate the delivery of all veterinary inspection services in sales barns and abattoirs and are responsible for co-ordinating the training of all veterinary inspectors. In many respects, the regional veterinarians act as troubleshooters in that they investigate unusual or difficult problems and devise corrective plans of action.

Additional responsibilities of regional veterinarians include:

- reviewing and evaluating policies and procedures;
- evaluating plant construction, sanitation, and water quality standards and personnel hygiene standards;
- assessing site plans and approvals for plant construction.
- designing and co-ordinating surveillance and monitoring programs to assess meat safety at licensed plants; and,
- approving wild game, processing protocols, harvesting methods, and packaging and labelling policies at licensed plants.

6.6.1.7 Veterinary Scientists

Veterinary scientists provide meat inspectors, appointed veterinarians and plant operators with advice and training regarding animal disease diagnostics and meat pathology. Veterinary scientists consult with meat hygiene officers to determine if veterinary examination is required in the disposition of animals on *ante* or *post mortem* examination.

The veterinary scientists are also responsible for:

- planning testing programs and co-ordinating the delivery of residue monitoring programs throughout the province;
- acting as liaison with laboratories in tracking and reporting samples;

- monitoring current slaughter and inspection programs to ensure their efficiency and effectiveness; and,
- providing expert scientific support in the development of training programs for meat hygiene officers as well as the development and delivery of training for veterinary practitioners.

6.6.1.8 Other Support

The meat inspection program is also supported by other specialized personnel including:

- compliance and advisory officers who address regulatory breaches;
- HACCP advisors who offer advice and assistance with respect to the implementation of food safety programs;
- a food engineer who provides expert engineering advice to plants, assesses requests for approval of construction or renovation plans, and conducts studies on wastewater and deadstock;
- a deadstock animal disposal advisor who conducts inspections of licensed deadstock operators and responds to complaints regarding abattoir waste and deadstock disposal;
- a weigh and trim inspector who oversees the livestock sales barns program and weighing and trimming procedures of rail grade cattle;
- two residue officers who coordinate and provide assistance in respect of the chemical residue and water control programs within the meat inspection program;
- a further processing coordinator who coordinates the further processing inspection program and training;
- a training officer who assists with the development, delivery and coordination of training; and
- a humane standards officer who was recently hired on a temporary basis to develop humane animal treatment and welfare standards.

6.6.2 Concerns Raised by Meat Inspectors

6.6.2.1 Introduction

A competent inspectorate is essential to ensure the integrity of the system and maintain consumer confidence. The watershed year for meat inspection in Ontario appears to be 1996. Until that year, the provincial meat inspection services for 288 abattoirs were delivered by 90 full-time salaried and 85 per diem contract inspectors. The government of the day then implemented a variety of cost-cutting measures which included the creation of additional "fee-for-service" independent contract positions to carry out the duties of meat inspectors. In 1998, the total complement of meat inspectors stood at 139 with only seven being full-time salaried staff.

The Ontario Public Service Employees Union (OPSEU) subsequently argued that the work being contracted out was actually bargaining unit work which could not be assigned to anyone outside the bargaining unit. This position was advanced through a grievance that was recently settled with the creation of 61 permanent and 57 unclassified or temporary meat hygiene officer positions. Effective March 15, 2004, those positions were filled by former fee-for-service contract meat inspectors.

The chart below sets out the numbers and employment status of provincial meat inspectors from 1995 to date:

OMAF Meat Inspection Staffing
April 1995 to March 31, 2004

Year	Ontario Public Service Employee Inspectors	Contract Inspectors (fee-for-service)	Total Number of Inspectors	Number of Abattoirs	Number of Animal Units Inspected[22]	Number of Inspection Hours
1995-1996	90	85	175	279	8.8 million	177,000
1996-1997	42	112	154	274	N/A	N/A
1997-1998	12	129	142	254	N/A	N/A
1998-1999	7	132	139	235	N/A	N/A
1999-2000	8	123	131	240	9.9 million	N/A
2000-2001	8	120	128	213	9.2 million	132,000
2001-2002	8	131	139	209	10.2 million	180,000
2002-2003	10	131	141	~200	10.1 million	195,000
2003-2004	71 F/T 57 P/T	0	128	~195	10.2 million	215,000

Note: The marking "~" indicates that the number is approximate as plants open and close within a twelve month period. For an explanation of the term "animal units" see footnote 22.

During the course of this Review, counsel and I met with many meat inspectors who expressed their concerns about certain shortcomings in the system and offered their views on what could be done to improve it. I have also had the benefit of comprehensive written submissions from OPSEU which include 43 proposed recommendations they urged me to adopt. I have determined that some of the subject matter they address relates to labour and personnel issues that are outside the scope of this Review, however, in most respects, I found OPSEU's submissions to be considered and helpful.

6.6.2.2 Restructuring and Focus of OMAF

In its brief, OPSEU submitted that food safety should be the first priority of OMAF and recommended an organizational restructuring to reflect that focus.

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[22] An animal unit is a measure of the volume of production at abattoirs. In the time it takes to slaughter and inspect a cow, for example, several chickens could be slaughtered and inspected. The animal units attempt to account for these differences by assigning units based on the length of time it takes to slaughter and inspect the species slaughtered. The chart shows that although the number of abattoirs is decreasing, the amount of inspection required is increasing. See also Appendix I, Slaughter Statistics for Provincially Inspected Abattoirs.

Although OMAF's commitment to the delivery of safe food is apparent from a review of all the safe food initiatives undertaken since the launch of the Ontario Food Safety Strategy, its traditional role as the champion of agriculture creates a potential conflict of interest. This is especially so in the Food Inspection Branch where the Director is charged with ensuring both the health of the industry and the safety of the public. In many respects, these goals are consistent, but they can conflict.

An allegation of unsafe practices can have devastating business consequences for the operator of an abattoir. There is an immediate financial loss if operations are suspended, but there may also be a long term impact on the operator's business reputation. Therefore, although a safety first response might dictate the provisional suspension of a plant licence, there is a potential for indecision on the part of the person charged with both fostering and regulating the industry.

OMAF has a well-earned reputation as the champion of agriculture in Ontario. However, during the course of the Review, it was apparent to me that there is a suspicion that public safety may not always be OMAF's primary consideration when a difficult choice has to be made between the interests of the "client", being agriculture, and the public at large.

There is no suggestion that OMAF would ever ignore a dangerous situation to protect the interests of the meat industry, but there is a concern that there may be some vacillating when the risk is less than manifest. Such hesitation could, of course, have serious public health consequences.

I do not contend that there is any policy of OMAF or any intention on the part of anyone at OMAF to make the safety of the public anything other than its first priority, but there is evidence of a reluctance to act decisively when the issues of public safety and client welfare collide.[23] This only fuels the perception that public safety is sometimes taking a backseat to the agricultural business. Having said that, let me quickly add that virtually every person I spoke to at OMAF and throughout the meat industry is focussed on safety. They all care about public health and realize that consumer confidence is essential to the industry's economic survival. They know that the only way they can gain and maintain that confidence is by implementing and maintaining safe practices and standards. Indeed, I believe, there is much in this Report that confirms this commitment to safety.

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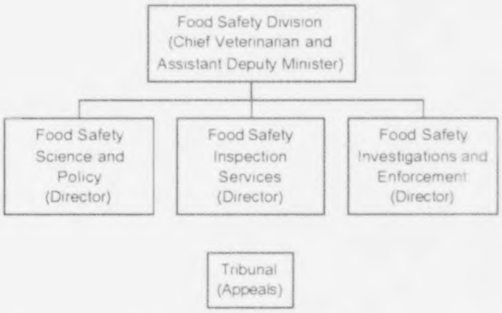
[23] See Chapter 11 on Compliance and Enforcement.

Nonetheless, it is my view that the current organizational structure of OMAF fails to reflect a "safety first" approach to agricultural management and food production. The Director of the Food Inspection Branch should not be in the position of having to promote and police the meat industry. There needs to be some separation between those two functions. Although good business practices and product safety are complementary goals, if the principle of safety first is to be embraced, it is important to establish a clear line between the promotion of the agricultural industry and meat safety.

For this reason, I am proposing the following structural reorganization that would see the creation of a Food Safety Division with its own Assistant Deputy Minister:[24]


Food Safety Division (Chief Veterinarian and Assistant Deputy Minister)
Food Safety Science and Policy (Director)
Food Safety Inspection Services (Director)
Food Safety Investigations and Enforcement (Director)
Tribunal (Appeals)

This structure also contemplates the creation of a new position of Chief Veterinarian of Ontario (CVO). This person, a veterinarian, would assume the lead within OMAF for all food safety issues and be OMAF's voice for any food safety crisis. Under the direction of the CVO, the Food Safety Division would be responsible for inspection services, animal health, food safety science and policy, and enforcement. The CVO would also have responsibility for reporting any food safety issues or concerns to the Ontario

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[24] Further reasons for this proposed restructuring that relate to issues of enforcement are explored in Chapter 11.

Food Safety Reporting Centre (OFSRC) which I have recommended be established to co-ordinate all matters relating to food safety reporting in Ontario.[25]

I recommend that a Food Safety Division be created within the Ministry of Agriculture and Food headed by a Chief Veterinarian of Ontario with three branches: Food Safety Science and Policy; Food Safety Inspection Services; and, Food Safety Investigations and Enforcement.

6.6.2.3 Working Conditions of Meat Inspectors

In addition to advocating a "safety first" organizational focus, the meat inspectors had a number of concerns that relate to the performance of their duties.

6.6.2.3.1 Education and Training

Meat inspectors have traditionally been long-term employees. However, after the government turned to primarily fee-for-service contract inspectors in 1996-1997, it became increasingly difficult to retain inspectors. The exceptionally high turnover created challenges in education and training. Those applying for the vacated positions often had little or no experience in the meat industry and there were fewer experienced inspectors to mentor the recruits.

In recent years, OMAF has made a considerable effort to update and improve their training program although there is a continuing need for more practical training. Indeed, there is good reason to reconsider the whole training program starting with prerequisite education.[26] This is dictated, in part, by the move towards science-based food safety which will require the learning and application of additional skills and knowledge.

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[25] See Chapter 3 in which I discuss and recommend an OFSRC.

[26] Unlike public health inspectors, both OMAF and CFIA meat inspectors are not required to have any post-secondary education, certification or relevant training in order to be hired. This appears to fall short of not only the public health sphere, but also comparable meat inspection systems across the world. In the U.S., applicants for meat inspector positions are now required to have 1 year experience in the food industry or 4 years of post-secondary education which includes 12 semester hours in biological, physical, mathematical or agricultural sciences. Australia, New Zealand and the United Kingdom each have national standardized certification requirements for meat inspectors which include national requirements for educational background, specific meat hygiene courses and competencies, and a certification examination.

OMAF and the University of Guelph, Department of Food Science have recently undertaken a special project to identify the educational and training needs of meat hygiene inspectors for the purpose of establishing, in Ontario, a common standard of training comparable to meat inspection training programs worldwide. The role of the inspector in the delivery of safe meat is critical. It is, therefore, essential that this initiative be pursued to ensure the availability of appropriate education and training for an inspectorate that is expected to fulfill an expanded role under the provisions of the *FSQA*.

I recommend that the provincial government provide appropriate funding to support the joint Ministry of Agriculture and Food and University of Guelph special project that was constituted to make recommendations for the establishment of a comprehensive training program for meat inspectors in Ontario.

6.6.2.3.2 Continuing Education and Training

Meat inspectors complained that the ongoing training for them was not sufficient. There are new and emerging issues which present a challenge to the meat inspection and regulatory system in Ontario. This challenge cannot be met unless the inspectorate is kept informed. Continuing education must be a component of any strategy to ensure ongoing competence of the meat inspectorate. Formal tracking of individual inspector's training and identified necessary competencies should be part of the continuing education program.

I recommend that the Ministry of Agriculture and Food implement a policy of continuing education and training for its meat inspectors.

6.6.2.3.3 Support from Management

According to OPSEU and many of the inspectors I interviewed, the single greatest operational challenge faced by meat inspectors is the absence of adequate support from OMAF management. Inspectors complain that too often no action is taken with respect to concerns they raise or their decisions on operational infractions are frequently overruled.[27] They maintain that this undermines their authority and makes it very difficult for them to effectively perform their duties.

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[27] Ontario Public Service Employee's Union, Submission and Recommendations to the Review into the Meat Regulatory and Inspection Regimes in Ontario (March 2004), p. 57-67.

The evidence with respect to inadequate support is mostly anecdotal and points out one of the shortcomings of the procedures in a Review of this nature. Without some mechanism to test the evidence it is difficult to assess its reliability. Nonetheless, I am satisfied from the information I have that this is an issue which does need to be addressed.

I expect the genesis of this problem can probably be traced to the staff restructuring that occurred in the 1990s. As the level of experience and expertise in the inspectorate was eroded, so too was the level of confidence in their abilities. This led to some operators challenging operational decisions which then required the intervention of the area manager. Too often, the area managers, who each have responsibility for about 25 abattoirs spread over a substantial geographic area, did not have the time to address the issue properly and often sought a compromise which, in the view of the inspectors, usually favoured the operator.

There is also an issue with technical support. Inspectors complain they do not have ready enough access to their regional veterinarian on technical issues that arise during the course of their duties. In my view, such support is essential to reduce the potential for conflict between inspectors and operators and to ensure the safe and proper operation of provincially licensed abattoirs.

I believe the issue of lack of support can be addressed in two ways. First, with the provision of better training, the inspectorate would have better tools to deal with problems as they arise. Second, the addition of management resources would reduce the workload of the current complement of regional veterinarians and area managers so they are able to respond when required.

OMAF policy should also provide that daily decisions concerning plant operations will be made by the on-site meat inspector and any challenge to that decision by a plant operator must be made to that inspector. The inspector should be required to report the incident promptly to the area manager who may overrule the inspector but, barring exigent circumstances, not without attending the plant to assess the problem.

I recommend that the Ministry of Agriculture and Food increase the number of regional veterinarians from two to five and the complement of area managers from eight to ten.

I recommend that the Ministry of Agriculture and Food require that all management intervention in operational decisions at provincially licensed plants be documented.

I recommend that the Ministry of Agriculture and Food establish a formal complaints process requiring industry complaints about meat inspectors to be made in writing with a copy to the inspector. The inspectors must be provided with an opportunity to respond to the complaint before a written response is provided to the complainant with a copy to the inspector.

One area of concern expressed by meat inspectors and the industry was whether the number of inspectors is currently sufficient to complete all of the inspection required to ensure compliance with the regulatory standards. Given the many changes to the system over the past few years, including the hiring process just completed this past March and the adjustments to the system that I am recommending, it is my view that inspection requirements and staffing levels should be re-examined.

I recommend that an independent audit be undertaken to determine the number of inspectors required in the abattoirs to provide proper inspection.

6.6.2.3.4 Part-Time Meat Inspectors

Currently, the inspectorate includes 57 part-time meat inspectors. Certain abattoirs do not require an inspector on a full-time basis. They are allotted a number of hours for slaughter and part-time inspectors attend for those hours. In the past, part-time meat inspectors have been paid an hourly rate for the hours of slaughter conducted by a plant during which they conduct inspection. If such inspectors identify a problem and withdraw from plants, thereby terminating the slaughter, they are also depriving themselves of their remuneration for that day. This puts part-time inspectors in a position of inherent conflict that should not exist. Inspectors who, in good faith, withdraw from abattoirs should not be financially penalized as a result.

I recommend that the provincial government ensure that a part-time meat inspector who, acting in good faith, stops the slaughter, receives payment for the balance of the scheduled hours for that day whether or not the slaughter resumes.

6.6.2.4 Nepotism

A number of meat inspectors complained that management at OMAF have hired family and friends for certain positions when there were other more qualified candidates. This is a concern to this Review to the extent this practice could result in unqualified people making decisions that affect the delivery of safe meat. I am not, however, in a position to make any findings with respect to these allegations, but do observe that there are conflict of interest policies in place for public servants that prohibit such conduct and every effort should be made to see that there is adherence to those policies.[28]

6.6.3 Audits of Abattoirs

In 1995, OMAF commenced annual audits to determine whether the structure, equipment, practices and operation of the abattoirs are in compliance with the regulations under the *MIA*. The audits cover three main areas – animal welfare, food safety and occupational health and safety. A standards of compliance manual lists all of the standards abattoirs are required to meet.

Veterinarians with experience in meat inspection are contracted each year to conduct the audits. Most have experience as auditors in the federal meat inspection system. These auditors, who are appointed as inspectors under the *MIA*, meet annually to discuss any new issues and interpretation of the standards with the goal to ensure consistent auditing across the province.

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[28] Ontario, Management Board Secretariat, Conflict of Interest and Post-Service Directive (28 October 1998).

The auditors are required to record the audit and meet with the operators in a timely manner after the audit is completed to provide a summary of their observations and the overall audit rating.[29] If there are any items of non-compliance, a due date by which the deficiencies must be corrected is set by the auditor and abattoir operator.

The rating assigned after an audit is a letter grade from AAA to F.[30] This is similar to the CFIA's rating system. The rating system provides for the following audit ratings:

AAA	exceeds regulatory requirements
AA	generally exceeds regulatory requirements
A	meets regulatory requirements
B	meets minimum regulatory requirements
C	is not operating in accordance with legislative requirements;
F	is not operating in accordance with legislative requirements and cannot operate as a licensed plant.

OMAF considers the audit ratings in its licensing of plants as a tool to ensure compliance with the regulatory standards. If an abattoir is given an F rating, the Director will typically issue a provisional suspension and a hearing will be held before the Director. Plants receiving a C rating are usually subject to increased inspection and reassessed prior to renewal of their licence, typically by way of a second audit to ensure that they do not present a food safety risk. Plants receiving a B rating are normally reassessed prior to renewal of their licence. These are not written policies.

I heard some complaints from both abattoir operators and meat inspectors that the auditing lacks consistency, both as between auditors and from year to year,[31] and that inspectors are not always informed of the deficiencies identified by auditors. Such inconsistency and lack of communication can create confusion and tension between the inspector and operator at the plant. In addition, several stakeholders identified a concern that the notice given to abattoirs of the date for the audit permits operators to prepare in advance and perhaps slaughter fewer animals to ensure the "best possible performance" during the audit rather than provide a normal snapshot of that plant's operations.

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[29] The tasks for which auditors are contracted to complete include the recording of the audit on FSDSS and the post-audit meeting with the abattoir operator within timeframes set by OMAF.

[30] This audit rating system was implemented in 2001-2002. Prior to this system, abattoirs were told a percentage rate of compliance based on the number of deficiencies versus the number of standards complied with at each audit.

[31] Some complained that the standards were "moving targets" such that abattoirs could build a new premises as approved and a few years later be told it did not meet the standards. Others complained that operations could be conducted in the same manner, yet receive different audit ratings in different years.

Auditing is a useful and desirable tool to measure the performance of the abattoirs and the inspection regime. It should continue. However, OMAF should strive to ensure that the process is transparent and consistent across the province. To achieve that goal, OMAF should conduct the slaughter portion of the audit unannounced, involve the inspectors primarily assigned to each plant in the audit follow-up meetings, develop a written protocol to ensure consistency in the process including second audits, and post the audit results and ratings on the OMAF website and at the abattoir.

6.6.4 Further Processing Inspections at Abattoirs

OMAF inspectors are scheduled to be present for all hours of slaughter at provincially licensed abattoirs, but not for all further processing hours.

Further processing refers to activities subsequent to the slaughter and dressing of the carcass. Some abattoirs do little or no further processing, whereas others process the meat from the slaughtered animals into a variety of meat cuts and meat products such as sausages. OMAF inspectors are scheduled to inspect further processing activities at abattoirs for a specific number of hours that are determined and allocated on the basis of risk - usually between 1.5 to 3.5 hours per week. The risk assessment takes into account food safety risk factors related to the types of meat products, plant compliance history, consumer complaints and food safety incidents.

The audit of the number of inspectors required in the system which I recommended above should specifically address the requirements and capacity for the provision of further processing inspection.[32] Once completed, OMAF could then assess the number of hours required for such inspection and assign inspectors accordingly. To assist in this process, operators should be required to advise OMAF of their scheduled further processing hours, as they are already required to do for slaughter hours.[33]

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[32] The number of further processing inspection hours in 2002-2003 was 27,380 and in 2003-2004 was 34,769 which may have been sufficient to meet the goal of at least 1.5 to 3.5 hours of inspection each week per abattoir, but it is difficult to determine due to seasonal operations and considerable fluctuation in volumes.

6.7 Provincial Abattoir Standards

In many respects, the regulatory standards for provincial abattoirs are not dissimilar to those for the federal abattoirs. They do, however, require modernization as they are largely unchanged since 1992. The regulatory standards which primarily focus on food safety relate to: plant construction and design; waste handling and disposal; water; sanitation; equipment and maintenance; pest control; temperature control; transport; personal hygiene; product flow; manufacturing controls; packaging; labelling; and, records.

The industry expressed two key concerns with respect to the regulatory standards. First, the standards are perceived to be "moving targets". Operators complained that the standards or the interpretation of them often changed without the operators being advised. This makes it difficult for the operators to properly plan and budget for necessary modifications. Second, much of the industry believes that their products are equivalent, or better, in terms of safety to those of federal abattoirs and think it is unfair that they are excluded from markets in other provinces.

6.7.1 Humane Treatment of Animals

The regulations under the *MIA* prohibit the handling of animals in a manner that subjects them to avoidable pain or distress and restrict the use of goads or electrical prods.[34] Although a number of stakeholders raised concerns about the humane treatment of animals at abattoirs, I am satisfied that the regulations and current codes of conduct, if properly enforced, provide for the proper treatment of livestock. However, this is dependent on there being sufficient personnel in place to effectively monitor and enforce this aspect of the slaughter process.

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[33] Despite being permitted by regulation to designate the hours of slaughter, OMAF has not done so, but rather only required advance notice, sometimes only 1-2 weeks' notice of the plants' slaughter hours. This provides significant flexibility to seasonal plants and plants with fluctuating volume, however raises concerns for some inspectors who have conducted inspection duties during hours when it is difficult to reach support, such as 4 a.m. There should be some limitations placed on the hours of slaughter, especially those so far outside of normal business hours that it endangers the inspector's ability to obtain support. See R.R.O. 1990, 632/92, amended to O. Reg. 319/99, s.88.

[34] R.R.O. 1990, 632/92, amended to O. Reg. 319/99, s.54.

In order to address the concerns of the stakeholders and the challenges of ensuring compliance, OMAF should continue the position of a humane standards officer, match the regulatory standards to current accepted standards for animal treatment, and develop a standardized safe animal handling training program for operators of abattoirs and all personnel involved in animal handling.

6.7.2 Slaughter and Dressing Procedures

Slaughter and dressing procedures can exacerbate contamination risks. The outside of the animal and certain internal organs carry considerable contamination including dirt and feces. It is important that slaughter and dressing are conducted in a manner which prevents any contamination of edible meat.

I heard, often during the course of the Review, that slaughter, dressing and meat cutting training courses are not as widely available in Canada as they are in other countries. The training of personnel is often done on the job at provincial abattoirs. At large abattoirs, only limited skills may be required since each worker is generally assigned a particular, repetitive task. However, in many small provincial abattoirs, the staff must be able to complete a wide array of tasks as there are only a handful of employees.

Meat inspectors advised that well-trained staff at abattoirs greatly assist them in completing the *post mortem* inspections effectively and efficiently, while poorly-trained staff are an impediment to the production of safe meat.

I recommend that the Ministry of Agriculture and Food develop standardized training programs for all personnel at abattoirs on humane animal handling, slaughter and dressing. OMAF should develop the training programs in collaboration with industry and require the delivery of the program either through industry groups or in a college program. The training programs will also provide an opportunity to communicate the regulatory standards to the industry.

6.7.3 Equipment and Construction

For food safety reasons, the layout and design of an abattoir must provide for the prevention of cross-contamination[35] and adequate separation of incompatible activities.[36] The construction of the building and the equipment used in abattoirs must permit proper slaughter and processing, allow for ease of cleansing and sanitation, and be properly maintained.

On the first application for a licence under the *MIA*, an abattoir must submit plans and specifications for the plant which have been approved by the regional veterinarian.[37] However, there is no regulatory requirement for prior approval of construction or renovation by existing licensees.

I was advised several times throughout the Review that one of the fundamental differences between the federal and provincial systems is construction standards. To obtain federal registration, the operator must develop a design and plan for construction approved by the CFIA and the plant must be fully operational and meeting all of the standards for construction, equipment and processes. If the CFIA refuses to register a plant or revokes its registration, the CFIA has no further involvement with the plant. If the plant continues to operate, it falls within provincial jurisdiction – either by continuing to process meat with public health inspection or continuing to slaughter with OMAF inspection and a licence under the *MIA*.

In the provincial inspection system, each time mandatory inspection has been imposed, first in the 1960s and later in 1982 and 1992 as exemptions were eliminated, a number of plants came into the system which had been built when there were no standards for construction. This has presented a challenge to the meat inspection and regulatory system in Ontario.

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[35] To prevent cross-contamination, usually a one-way flow process is required which involves no backtracking of workers, products and packaging materials at any stage of production. The flow starts from the arrival of the raw material through to the packaging and shipping. From "dirty" to "clean".

[36] Physical separation or separation by procedures designed to prevent contamination during one activity from hazards associated with another activity.

[37] R.R.O. 1990, Reg. 632/92, amended to O. Reg. 319/99, s.4(1)(a)

Both OMAF and industry have expended considerable effort and resources to improve the equipment and construction of abattoirs or, in the alternative, ensure processes are in place to reduce risks. Many provincial abattoirs would have to destroy their existing structures and build an entirely new plant to meet the construction and design standards of the federal system. However, that is not the only option to ensure safe meat production. Processes can eliminate the risks associated with buildings that were not designed to provide for segregation and prevention of cross-contamination. For example, if a plant does not have separate rooms for each step from slaughter to shipping a meat product, processes can be implemented to conduct each step in turn, with sanitation of the area between each step. These processes, embodied in a written and approved protocol, with proper monitoring and enforcement, should be permitted to allow plants to continue with existing buildings, so long as meat safety is not compromised.

The regulations under the *MIA* now include specific standards for equipment, construction and maintenance and, according to OMAF policy, construction or changes to processes at licensed abattoirs are only allowed with written approval from the regional veterinarian. Published guidelines provide that equipment, construction material and construction methods may be approved if they are accepted or certified by other specified food safety organizations.[38] The authority of OMAF to enforce standards for new construction, equipment or renovation and to approve, monitor and enforce protocols to ensure meat safety without substantial capital costs, should be reinforced in the regulations. Since any construction, renovation, new equipment or changes in processes by any abattoir should be subject to provincial approval, OMAF must be sufficiently resourced to respond in a timely manner to all approval requests.

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[38] CFIA approved, USDA – FSIS accepted, National Sanitation Foundation International certified, 3-A Sanitary Standards of International Association of Milk, Food and Environmental Sanitarians, U.S. Public Health Service certified, USDA – Agriculture Marketing Service certified, or certified by the Fleischerei-Berufsgenossenschaft.

6.7.4 The Role of Veterinarians

In federally registered abattoirs, there is at least one veterinarian assigned to be present at the plant during slaughter hours.[30] The veterinarian is contacted by meat inspectors who identify abnormal behaviour or signs of illness in livestock. The veterinarian determines whether any steps can be taken to eliminate any contamination and whether the livestock or meat should be condemned.

There are no provincially licensed abattoirs which have a veterinarian in attendance during all slaughter hours. Instead, the meat inspectors have access to veterinarians for consultation. If a meat inspector identifies an abnormality on *ante* or *post mortem* examination, the inspector contacts a veterinary scientist at OMAF head office in Guelph by telephone during regular office hours or a regional veterinarian during off hours to obtain advice and direction. The veterinary scientist or regional veterinarian may direct the disposition of the livestock, give advice for further inspection, or advise the inspector to arrange for an appointed veterinarian to examine the livestock.

Appointed veterinarians are veterinarians licensed by the College of Veterinarians of Ontario and contracted by OMAF to attend at abattoirs or sales barns to examine livestock when requested or scheduled. The College is a self-governing professional body which regulates veterinary practice in Ontario to ensure competency and professionalism. The appointed veterinarians are paid an hourly rate and are appointed under the *MIA* or *LCSA* as veterinary inspectors under those statutes.

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[30] There may be occasions at federally registered abattoirs when a veterinarian may not be present and on those unusual occasions, the plant may be permitted to continue to operate provided that the inspectors working at the plant have access to a veterinarian at another plant who can provide advice to them over the telephone or come to the plant to examine suspect animals at the request of the inspectors.

The number of appointed veterinarians utilized by OMAF in the last few years is set out in the following table:

Year	The Number of Appointed Veterinarians
1999	146
2000	152
2001	152
2002	158
2003	146
2004	129

Appointed veterinarians are trained either by accompanying an experienced appointed veterinarian on calls before they attend OMAF training or only by attending OMAF training for around two hours (sales barns calls) to five days (*MIA* abattoirs calls). OMAF also provides some updated training to appointed veterinarians from time to time.[40] There is no written training plan or policy for these veterinarians.

During the course of the Review, I heard concerns expressed that some appointed veterinarians lack sufficient training and experience. In addition, some concern was expressed about an inherent conflict of interest when an appointed veterinarian is hired by OMAF to examine an animal which was previously under their care or owned by one of their private practice clients.

These are legitimate concerns, however, to the extent that any veterinarian acts in a manner which is contrary to the ethics and standards of the veterinary profession, the existing regulatory system for the profession provides a complaint process which can be utilized. Further, my earlier recommendation for the appointment of additional regional veterinarians will give the regional veterinarians additional capacity to monitor the training and activities of the appointed veterinarians. In any event, to the extent appointed veterinarians are expected to provide expert assistance to the meat inspectorate, they must be properly trained.

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[40] The last such training was in November 2002 for three hours and covered pathology of beef and hog inspection with disposition options and challenging case scenarios, BSE, laboratory submissions, emergency and billing protocols.

I recommend that the Ministry of Agriculture and Food develop and implement a plan for the initial and continuing education and training of appointed veterinarians.

6.7.5 Exemptions

There are a number of circumstances in which abattoirs are permitted to deviate from typical regulatory standards. Some are exemptions from otherwise prescribed procedures set out in the *MIA* regulations and others arise from powers given to OMAF under the regulations to approve and permit "atypical" procedures.[41]

These exemptions for and approvals of atypical procedures provide flexibility to the system, which is desirable if it does not jeopardize meat safety or involve additional costs to the public. The concern expressed most often about these exemptions and approvals relates to the absence of any formal system for recording them. Too often, meat inspectors or area managers who were not present at the time of the approval are not informed of them. There is no system that provides for a review of the approvals. A written policy communicated to all meat inspection personnel and the industry requiring that records be kept of such approvals and atypical procedures together with regular review of the approvals, would assist in ensuring safety standards are being maintained.

I recommend that the Ministry of Agriculture and Food implement a system to require all exemptions and approvals of special procedures be recorded and accessible to all meat inspection delivery staff. The system should include a regular review of the exemptions and approvals on a fixed schedule and upon change of abattoir ownership or management.

6.7.6 HACCP

HACCP programs are not mandatory at provincially inspected abattoirs. A voluntary HACCP program, HACCP Advantage, has been developed by

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[41] For example, harvesting and preparation of non-traditional or specialty meat products; alternative methods for disposal of waste; processing of wild game carcasses; time and day separation with backwards flow of carcasses; transfer of carcasses between plants before specified risk materials are removed; and animals ritually slaughtered in accordance with religious practice. See R.R.O., Reg. 632/92, amended to O. Reg. 319/99, ss. 4 & 74 and OMAF, *Meat Inspection Policy and Procedure Manual* (Revised, 1 June 2003).

OMAF. This program and my recommendations regarding the implementation of mandatory HACCP-based programs at abattoirs are discussed in full in Chapter 3. I have recommended mandatory HACCP-based programs at abattoirs, but with a phase-in period of three to five years. The industry should be informed well in advance of all regulatory changes, including the timeline for mandatory HACCP to permit ample opportunity for compliance.

OMAF should provide HACCP training for all meat inspectors and abattoir operators and ensure that the HACCP food safety program is completely integrated with the inspection program. Consideration will also have to be given to cost-sharing between industry and the provincial government in the areas of training and auditing.

6.7.7 Traceability, Biosecurity and Disease Surveillance

There is no requirement for a full traceability system or biosecurity plans at provincially licensed abattoirs. Earlier in this Report, I recommended the development of a full traceability system and biosecurity plans throughout the food continuum. At present, abattoir operators must keep records of all animals slaughtered and to meet sanitation requirements within the plant, but are not expected to have a system that permits the tracing of each product back to the particular slaughtered animal or a biosecurity plan for things entering or leaving the abattoir property.

Slaughter provides an opportunity for access to carcasses for testing purposes - both to determine the presence of disease or high pathogen levels in livestock populations and also to establish whether a particular animal is affected if it presents with apparent health problems. The issues regarding surveillance and my recommendations to strengthen this area of the food safety system are discussed in Chapter 3.

6.7.8 Disposal of Meat Production Waste

The slaughter, dressing and further processing of meat at abattoirs produces substantial quantities of waste each year. The issues relating to the disposal of this waste will be addressed in Chapter 7.

6.7.9 Non-Ambulatory Animals (Downers)[42]

Dead animals (those that have died from any cause other than slaughter) are prohibited from being processed for human food because they present an elevated health risk to humans.[43] Likewise, fallen animals that are disabled by disease or other condition that is likely to cause death must be euthanized[44] and cannot be sold or processed as food for human consumption. A non-ambulatory animal or downer is one that is "unable to stand without assistance or to move without being dragged or carried" but, if capable of passing inspection, may still be slaughtered for meat.[45]

Non-ambulatory animals, in particular cattle, have been a food safety and animal welfare concern for a number of years. Recent events, however, have focussed attention on the issue of downer cows in Ontario. Aylmer Meat Packers Inc., the subject of much publicity in the summer of 2003 as a result of a product recall, was a facility that processed a large number of downer cows. Also, bovine spongiform encephalopathy (BSE), also known as mad cow disease, was discovered in downer cows in Alberta and in Washington State, U.S. in 2003. The U.S. Department of Agriculture temporarily banned the slaughter of downers in U.S. slaughterhouses as of December 20, 2003, and the CFIA has recently advised federally inspected Canadian establishments that if they wish to access U.S. markets, they will also have to stop processing downers. This is likely to greatly increase the pressure on provincially inspected abattoirs to handle these animals.

In addition, certain stakeholders believe the transport of downer animals is inhumane and there is an understandable reaction from consumers that meat from these animals is unwholesome. However, many downer animals have injuries or other problems that on close examination have little or no relationship to food safety or wholesomeness. Those in the industry therefore, maintain it would be wasteful not to use the meat from these animals provided it conforms to meat inspection standards. Furthermore, banning these animals from the food chain could encourage illegal slaughter and the sale of uninspected meat processed under unhygienic conditions.

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[42] In this section, I rely greatly on the *Report of the Expert Advisory Panel, The Scientific and Regulatory Basis of Meat Inspection in Ontario* (May 2004) [hereinafter *Expert Advisory Panel Report*].

[43] *Dead Animal Disposal Act*, R.S.O. 1990, c. D.3, s. 4(4).

[44] *Ibid.*, s. 3(2).

[45] *Livestock and Livestock Products Act*, R.S.O., c. L.20; O.Reg. 732/94, s. 1.

Any solutions to the downer cow problem must address this complex array of food safety, animal welfare, economic and consumer confidence issues.

6.7.9.1 Food Safety and Consumer Confidence

Non-ambulatory cattle are known to be at increased risk of certain food safety hazards, in particular diseased tissue, veterinary medicine residues, and BSE, although the absolute risk of BSE in Ontario cattle is currently thought to be very small. Diseased tissue is effectively identified and removed through proper routine *ante* and *post mortem* inspection. Residues of veterinary medicines are more of a concern in downers than other groups of cattle because downers are more likely to have been recently treated, perhaps without observance of the necessary pre-slaughter treatment withdrawal times. Ontario has made a significant contribution to alleviate this problem through its requirement for veterinary certification prior to transport and slaughter and through the routine testing of downers.[46] Veterinarians are asked to describe recent health and treatment information on their certificate. If proper withdrawal times have not been observed, then the meat inspector can judge the animal as unfit for human consumption. In addition, tissues from downers are routinely tested for veterinary medicine residues and the carcasses are held until the test results are returned. I am satisfied based on the advice I have received that the foregoing measures, if followed, adequately address food safety concerns that relate to diseased tissue and resides from veterinary medicines.

With the discovery of indigenous BSE in North America, we now have to confront the food safety and consumer confidence issues posed by the risk of BSE in downer cattle. The advice I have received leads me to conclude that there is very little, but nevertheless greater than zero, risk of BSE in cattle in Canada. While all cattle are theoretically at some risk, evidence shows that the risk is greater in older animals, especially those born before the meat and bone meal feeding ban of 1997[47] and in cattle that are downed, disabled, diseased or distressed.

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[46] *Ibid.*, s. 5; see also OMAF, *Practitioner's Manual for Handling Non-Ambulatory Animals*, (revised 4 January 2002).

Several measures are available to address BSE food safety and consumer confidence issues. Current scientific information indicates that the most critical and widely applicable food safety measures for BSE are effective *ante mortem* inspection and effective Specified Risk Material (SRM) removal from carcasses. British authorities report that SRM removal eliminates greater than 99% of infectivity in an infected animal.[48]

An *ante mortem* inspection will remove from the human food chain those animals showing clinical signs of neurological disease. Laboratory testing for BSE is another control option, and some countries (eg. U.K. and Japan) use such testing for inspection purposes.[49] At this time, there is no such testing for inspection purposes in North America. Data from the U.K. shows that testing identifies at least some clinically normal but BSE-positive animals that would not be identified on *ante mortem* inspection. However, laboratory testing is not perfect because it is believed that only animals in the late stages of disease are likely to test positive.[50] This application of laboratory testing must be distinguished from random surveillance testing that is intended to determine if BSE exists in a population of cattle and at what level. Such surveillance testing provides critical information to assess risk but serves no direct food safety purpose.

Will implementation of some or all of these measures provide 100% assurance of safety? The short answer is no, because BSE risk cannot be absolutely eliminated unless beef is banned. We do not know all the facts about BSE and its risks to humans as the science in this field is continuing to evolve. In addition to the small but real limitations in *ante mortem* inspection, SRM removal and laboratory testing as described above, there is also a chance that SRM will contaminate some meat even with high quality inspection, and HACCP-based food safety programs in place. Nevertheless, I am advised that the available scientific evidence suggests that sound, strictly enforced inspection and SRM removal programs provide a very high degree of public health protection, and that these measures are proportional to the very small BSE risk posed by all groups of cattle, including downers in Ontario.

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[47] *Health of Animals Regulations*, C.R.C., c. 296, ss. 162, 163 and 164.

[48] Effective SRM removal includes removal of the skull, brain, trigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia or cattle over 30 months of age and the distal ileum from cattle of all ages. United Kingdom, Department for Environment, Food and Rural Affairs, *BSE: Public Health: Over Thirty Month Cattle* (4 December 2003), available from http://www.defra.gov.uk/animalh/bse/public-health/otms.html [accessed 21 June 2004].

[49] Testing for inspection purposes involves holding the carcass pending receipt of the test results.

[50] USDA, FSIS, *Current Thinking on Measures that Could be Implemented to Minimize Human Exposure to Materials that Could Potentially Contain the Bovine Spongiform Encephalopathy Agent* (15 January 2002) available from http://www.fsis.usda.gov/[illegible]/topics/BSE_thinking.htm [accessed 21 June 2004].

In Ontario in 2001/02, there were approximately 3,400 cattle with non-ambulatory transport certificates and 190 (about 6%) were ultimately condemned as being unfit for the human food supply. In 2002/03, non-ambulatory transport certificates were issued for about 4,500 cattle with 400 (about 11%) of those animals being condemned. The total number of cattle slaughtered in provincially licensed abattoirs during each of these periods was approximately 92,000.[51]

6.7.9.2 Animal Welfare Concerns

Transport of downer animals is particularly problematic and there are significant doubts as to whether it is possible to move these animals in an acceptable and humane fashion. In a recent article published in the Canadian Veterinary Journal, the following opinion is expressed:

> *The marketing of livestock compromised by disease or injury degrades the welfare of the animal; it is an economic burden to the producer, the transporter and the processor; damages the prestige of the livestock production industry; and potentially endangers public health. The veterinary profession and the agricultural industry nationwide should arrive at the same conclusion regarding the transportation of non-ambulatory animals. It is simply impossible to move mature non-ambulatory livestock humanely, no matter how close the slaughter plant.*[52]

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[51] Information provided by OMAF from its FSDSS.

[52] G. Doonan et al., *Nonambulatory livestock transport: The need for consensus*, Canadian Veterinary Journal, No. 44(8), p. 667-672 (August 2003).

If veterinary treatment and nursing care are insufficient to restore these animals to an ambulatory state in a timely and humane fashion, the only practical alternative would appear to be on-farm euthanasia or on-farm slaughter.[53] On-farm slaughter has the advantage of salvaging meat that would otherwise be wasted, and if properly conducted, inspected and regulated, could provide market access for the product.

6.7.9.3 Proposed Protocol for Non-Ambulatory Animals

Cattle become non-ambulatory at all ages and for a variety of reasons. However, most downer animals are dairy cows that are at the end of their productive lives and are being sent for slaughter to salvage what little value remains. The quality of their meat is usually low and although it cannot be said that this meat is unsafe, there is a heightened risk. Since it is the producer who benefits most from permitting these higher risk animals into the system, it is the producer who should bear the cost of any additional vigilance that is required to ensure the safety of that meat.

The producer currently bears the expense of having a veterinarian examine the animal for the purpose of issuing a certificate for direct transport to slaughter.[54] Although not currently specified, the regulations should also require the veterinarian to record the diagnosis on the certificate and no non-ambulatory animal should be admitted to an abattoir unless accompanied by a certificate for direct transport. A mandatory histopathological examination of the brain and spinal cord should be conducted for every non-ambulatory animal approved for slaughter, in addition to routine drug residue tests and BSE testing. Although there is little scientific evidence to support the testing of all non-ambulatory cattle for BSE, there is sufficient public concern about BSE and the elevated risk associated with downers that I am satisfied such a measure is warranted to maintain consumer confidence in the meat supply in Ontario at this time. The cost of all testing of non-ambulatory animals should be charged back to the operator of the abattoir who is in the best position to ensure that such costs are ultimately borne by the animal owner.

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[53] Mobile slaughter units are licensed in Alberta and permitted by regulation to slaughter livestock on a producer's land. The meat cannot be sold and can only be consumed by the producer and his/her immediate family.

[54] O. Reg. 734/94, s. 5; see Appendix G where the standard form Certificate for Direct Transport to Slaughter is reproduced.

I recommend that the regulations relating to *ante* and *post mortem* inspection and specified risk materials removal be closely monitored and strictly enforced. The HACCP programs at abattoirs should include training of personnel on the proper removal of SRM. The provincial government should assist the industry to develop a standardized SRM removal training program.

I recommend that non-ambulatory animals be prohibited from entering an abattoir unless accompanied by a veterinarian's certificate for direct transport that provides a veterinarian's diagnosis of the condition or disease that has rendered the animal non-ambulatory and that drug residue testing, histopathological testing of the brain and spinal cord and BSE testing of every non-ambulatory animal be conducted, with the carcass and inedibles being held pending evaluation of the test results. The cost of such tests should be charged to the abattoir operator, but ultimately borne by the owner of the animal.

Since the public will benefit from the BSE testing in that it will contribute to the provincial government's BSE surveillance program, consideration should be given to OMAF subsidizing some portion of the cost of that testing.

I recommend that research be urgently carried out into the feasibility of regulated on-farm slaughter of non-ambulatory animals in Ontario. In the absence of regulated on-farm slaughter, I recommend the transport of downer animals be prohibited except by a licensed transporter who has the necessary equipment and expertise to transport such animals humanely.

6.8 Abattoir Standards in Other Jurisdictions

6.8.1 Standards in Other Provinces

The standards for provincial abattoirs and inspection of those abattoirs varies across the country. In some cases, the province has contracted with the CFIA to conduct the inspection at provincial abattoirs.[55] In others, the provincial governments conduct mandatory inspection to provincial regulatory standards similar to Ontario[56] and some do not yet have mandatory inspection of abattoirs.[57] The system in Ontario is obviously better than non-mandatory regimes and appears to be equivalent or superior to other provinces.

6.8.2 International Standards

International standards for meat inspection systems at abattoirs have been and continue to be developed by the Codex Alimentarius Commission. These standards are established through a consultation process that ensures the standards are amended to match current science, technology and risks. The 1995 Agreement on the Application of Sanitary and Phytosanitary Measures and the Agreement on Technical Barriers to Trade formally recognized the Codex Alimentarius (Codex), amongst other international standards, guidelines and recommendations, as reference points for facilitating international trade and resolving trade disputes in international law. The Codex includes a code for *ante* and *post mortem* inspection and draft hygienic codes of practice for meat and poultry slaughter and processing which address the standards applicable to abattoirs.[58]

The federal system in Canada strives to match these international standards for trade and meat safety purposes. Ontario should do so as well.

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[55] For example, British Columbia, Saskatchewan and Manitoba have each contracted with the CFIA to provide inspection. The CFIA conducts the same *ante* and *post mortem* inspection as would be conducted in federal plants, but otherwise inspects to provincial regulatory standards. The provinces pay the CFIA for the inspection services. An estimated cost to hire the CFIA to conduct inspection at provincial abattoirs in Ontario was about three times higher than the current cost of the inspection services.

[56] For example, Alberta has its own inspection legislation, regulations and inspection program.

[57] For example, Newfoundland and Labrador, Saskatchewan, British Columbia.

[58] Codex Alimentarius Commission, *Recommended International Code For Ante-Mortem And Post-Mortem Inspection Of Slaughter Animals And For Ante-Mortem And Post-Mortem Judgement Of Slaughter Animals And Meat*, CAC/RCP 41-1993; *Recommended Code Of Hygienic Practice For Poultry Processing*, CAC/RCP 14-1976); *Recommended International Code Of Practice - General Principles Of Food Hygiene* , CAC/RCP 1-1969, Rev. 3 (1997), Amd. (1999); *General Principles of Meat Hygiene*, CAC/GL 52-2003; and *Report of the Tenth Session of the Codex Committee on Meat Hygiene*, Alinorm 04/27/16, Appendix II, Draft Code of Hygienic Practice for Meat (20 February 2004).

6.8.3 National Meat and Poultry Regulation and Code

In 1994, the federal and provincial agriculture ministers endorsed a blueprint for a Canadian Food Inspection System (CFIS) as part of work started in 1993 to move toward an integrated Canadian food inspection system responsive to both consumers and industry. The blueprint was subsequently agreed to by the health ministers and the CFIS Implementation Group (CFISIG) was set up in or about 1994 with membership from each province and territory and the federal government. In order to implement the blueprint, it was determined that three goals needed to be met: harmonized standards; integrated inspection delivery systems; and, an inter-jurisdictional forum for harmonizing standards, procedures and methods for food inspection.

Harmonized standards, in the CFIS context, refer to those that are jointly developed and agreed upon by federal, provincial, and territorial governments based, where possible, on international standards including the Codex. The systems of food inspection in Canada deal with issues of food safety, market access, and protection against fraud. One goal of the CFISIG is to consolidate standards for both food safety and trade[59] to permit trade between provinces once the federal and provincial standards are harmonized.

The CFISIG has acted as the forum for harmonization since its creation. Within the CFISIG, eight committees were formed to develop model regulations and codes with the aim to achieve the national harmonization and integration objectives. One of these committees developed the National Meat and Poultry Regulations and Code (NMPRC). The NMPRC was approved in October 2000 by the CFISIG and a written amendment process was developed. The regulations set out requirements and the code is designed as an interpretive guideline to describe how to implement the regulatory requirements.

The Ontario delegation has put forward a number of proposed amendments to the CFISIG to ensure that the NMPRC remains current and consistent with the federal and international standards. Food safety is not a stagnant area, but rather one that is continually evolving, to address new and emerging science, technology and risks. The provincial government has an obligation to keep pace and ensure that its food safety system and personnel remain current.

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[59] Trade standards refer primarily to those quality elements that identify, characterize, and market a product.

Attempts to implement the NMPRC in order to give provincial abattoirs potential access to other provincial markets have met more obstacles than have national codes relating to other areas of food inspection. The primary obstacle is that, unlike other commodities, such as dairy, meat production is the subject of both federal and provincial legislation and current federal legislation prohibits interprovincial trade unless the slaughter was conducted at a federal plant. None of the provinces have yet adopted or implemented standards which match those of the NMPRC although several are working towards this goal.

In my view, the regulations under a proclaimed *FSQA* should adhere to the NMPRC. From a review of the work undertaken to date, I believe that the provincial government is well-positioned to implement such standards.

6.9 Provincial Abattoir Services

The provincial abattoirs offer custom slaughter capacity, dressing and processing services for wild game and a wide variety of specialty or niche products, not all of which are available in federal abattoirs.

6.9.1 Wild Game

Hunters kill a variety of species of wild game each year in Ontario. Some hunters take the wild game carcasses to meat processing plants and provincially licensed abattoirs to be processed. The meat is packaged and returned to the hunter for personal and family consumption. The sale of wild game meat to the public is not generally permitted.[80]

Since wild game is not inspected before it is killed, permitting such game into abattoirs and processing plants is an exception to the prohibition against uninspected meat in such plants. The purpose for a prohibition against uninspected meat in premises where inspected meat is present is to prevent cross-contamination and ensure food safety. In order to determine whether the limited exemption for wild game is justified, it is necessary to consider the potential risks and the apparent benefits.

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[80] Several of the wild game species such as deer and elk are raised on farms. As farmed animals, they can be slaughtered pursuant to the *MIA* and their meat sold to the public.

6.9.1.1 Food Safety Risks Associated with Wild Game

Wild game can carry disease, pathogens and unknown chemical residues which can be transmitted or cause harm to humans by contact or consumption. Two known diseases are chronic wasting disease (elk and deer) and bovine tuberculosis (bison and deer).

Chronic wasting disease (CWD) is similar to BSE and affects elk, mule deer, and red tailed deer. It has been diagnosed in wild deer and elk in parts of the U.S., but not in Ontario.[61] There is also no evidence yet that CWD can infect humans. Nonetheless, the World Health Organization recommends that humans avoid eating any part of an infected animal.[62]

Bovine tuberculosis (bovine TB) is an infectious disease caused by bacteria and can be transmitted between wild game populations, farm animals and humans. Cattle are the most common host for the bacteria, but bison and all of the deer species can be infected. Bovine TB is not a naturally occurring disease in wild animals and is believed to be uncommon in wild animals in Canada. Bovine TB was confirmed in an Ontario dairy herd in April 2002, but this was the first case since 1992.[63]

There are other diseases, such as foot and mouth disease and diseases caused by the West Nile virus, which could be present or develop in the wild game population, but again there is no evidence that those diseases can be transmitted from the meat of wild game to humans.

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[61] Ontario Ministry of Agriculture and Food, *Chronic Wasting Disease Update* (7 July 2003), available from http://www.gov.on.ca/OMAFRA/english/livestock/alternat/facts/info_chronic_wasting_update.htm [accessed 5 May 2004].

[62] World Health Organization, *WHO Consultation on Public Health and Animal Transmissible Spongiform Encephalopathies: Epidemiology, Risk and Research Requirements*, (Geneva: World Health Organization, 1999).

[63] Ontario Ministry of Agriculture and Food, *Bovine Tuberculosis in an Ontario Herd Practitioners Alert* (July 2002), available from http://www.gov.on.ca/OMAFRA/english/livestock/vet/facts/info_bovine_tuberculosis_practitioners_alert.htm [accessed 29 April 2004].

Improper handling and dressing of wild game prior to the carcasses being delivered to meat plants increases the risk of cross-contamination and the potential for the transmission of disease and pathogens. For example, the hunted wild game may have been partially dressed in unsanitary conditions in the bush, carried through the woods, transported in the back of a truck, or perhaps stored for some period before reaching the meat plant.

The most significant benefit of wild game carcasses being permitted into provincial abattoirs is the likelihood of the meat being processed under proper sanitary conditions. The availability of some inspection and the opportunity to conduct surveillance testing of the meat product to identify disease or pathogens in the particular animal and the wild game population are also benefits.

6.9.1.2 Ontario Legislation Addressing Wild Game

The *Fish and Wildlife Conservation Act, 1997* (*FWCA*) administered by the Ministry of Natural Resources (MNR) is one of the key pieces of legislation governing hunting in Ontario.[64] The *FWCA* has a number of provisions which impact food safety:

- a prohibition on hunters abandoning wild game carcasses;[65]
- a requirement that harvested animals be identified as hunted meat;[66] and
- a prohibition on the purchase or sale of game unless specifically authorized by the MNR.[67]

Although the *MIA* does not apply to the processing of hunted wild game,[68] its regulations require the operators of abattoirs to maintain their premises and equipment in a sanitary condition which necessitates the implementation of sanitation and cross-contamination measures for the processing of wild game in those plants.[69]

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[64] *Fish and Wildlife Conservation Act, 1997*, S.O. 1997, c. 41.
[65] *Ibid.*, s. 36.
[66] O.Reg. 665/98, s. 17.
[67] O.Reg. 666/98, s. 20.
[68] *MIA*, *supra* note 15, s. 1.

The *Food Premises* regulation under the *Health Protection and Promotion Act* (*HPPA*) has been amended to prohibit uninspected meat in food premises as of September 1, 2004, unless obtained through hunting.[70] Such meat will still be permitted at food processing plants for the purpose of custom-cutting, wrapping and freezing for its owner.

6.9.1.3 Current Regime in Ontario for Wild Game Meat Processing

In Ontario, hunters who have not obtained a licence in the past are now required to complete a hunter's training course which includes some information on the handling of carcasses. The Ontario Federation of Anglers and Hunters (OFAH), the MNR and other agencies including public health units have produced educational materials on good practices for the handling of hunted wild game.[71]

Several provincially inspected abattoirs process wild game carcasses for their customers. OMAF has a policy with respect to the hanging and processing of game meat at these abattoirs.[72] The policy is limited to deer, moose, elk and bear carcasses killed by gunshot or arrow. The policy requires that plant operators develop a written program for handling wild game, obtain written approval of the program from OMAF and advise OMAF staff in advance of accepting any wild game. The purpose of the policy is to ensure that abattoirs follow the practices and procedures that are designed to reduce the risk of the premises or inspected meat on the premises being contaminated by the hunted wild game. Operators are required to keep records to demonstrate compliance with their programs.

All wild game meat must be kept separate from inspected meat and when the processing of the wild game is complete, all processing rooms and equipment must be thoroughly washed and sanitized before the processing of any inspected meat is undertaken.

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[69] O.Reg. 632/92, amended to O.Reg. 319/99, s.19.
[70] R.R.O. 1990, Reg.562, as amended to O.Reg.74/04, s.40.
[71] Muskoka-Parry Sound Health Unit, *The Safe Handling of Wild Game* (April 1996).
[72] Ontario Ministry of Agriculture and Food, *Meat Inspection Policy and Procedure Manual* (Revised 4 January 2002), Policy Section 10.01.

Although meat inspectors must be present for any slaughter at a provincial abattoir, they may not be there for the processing of wild game since that is usually undertaken outside of the hours designated for slaughter. If they are present, the inspection of such processing involves determining whether the policy, procedure and standards are being met. In addition, the wild game policy of each plant is reviewed during the annual audit to ensure it conforms with prescribed standards for processing game meat.

6.9.1.4 International Standards on Wild Game Meat Processing

In some jurisdictions, game meat may be sold to the public. Where this is permitted, the Codex Alimentarius Commission (CAC),[73] recommends the following practices to limit food safety risks:

- the plant should be dedicated to the processing of game meat;
- hunters must provide information on the health status of the animal prior to death, the location and time of death, and any information relevant to potential chemical residues;
- hunters should be taught good practices in the manner of the kill, hygiene, timeliness of bleeding and evisceration, and post-harvest handling;
- certain organs should be left with the carcass to be brought with it to the plant;
- the carcasses should be cooled as soon as possible to between 4 to 7° C and transported in a clean vehicle, to avoid contamination, within 24 hours of the kill; and
- wild game should be examined for contamination prior to entry into the plant and then if acceptable for entry, undergo an examination with its organs in the plant prior to processing.

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[73] Codex Alimentarius Commission, *Report of the Tenth Session of the Codex Committee on Meat Hygiene*, Alinorm 04/27/16, Appendix II, Draft Code of Hygienic Practice for Meat (at Step 6); *Recommended International Code of Hygienic Practice for Game*, CAC/RCP 29-1983, Rev 1 (1993).

6.9.1.5 The Consumption of Wild Game in Ontario

The consumption of wild game meat by anyone other than the hunter and his or her family is prohibited, although the MNR may authorize the serving of wild game at a specified function.[74] I am advised that the public consumes wild game meat with the authorization of the MNR at certain wildlife fundraising dinners and through the donation of wild game meat to food banks. This meat usually comes from animals hunted under licence or from pre-planned culls, but it may also come from confiscated carcasses. I understand that certain protocols have been established through discussions among the MNR, the Ministry of Health and Long-Term Care (MOHLTC) and OMAF for the safe handling and processing of such meat. These protocols are in many respects similar to those recommended by the CAC and, although followed on at least a few occasions, for culls of deer at provincial parks, are not always adhered to.

The MNR also has a policy for its field staff to follow in authorizing fish and wildlife fundraising dinners.[75] Under this policy, such dinners are only approved for non-profit and charitable groups. Wild game served at such dinners must be harvested legally and donated. Those attending the dinner must also be advised that the meat was not inspected under the *MIA* by notices on the tickets and on a sign posted at the entrance to the dinner.[76] Although permitting the serving of wild game at fundraising dinners and allowing its distribution through food banks may be desirable, there are food safety concerns that must be addressed.

I recommend that the *Food Safety and Quality Act, 2001* and its regulations prohibit the consumption of wild game meat by anyone other than the hunter and his or her immediate family unless the harvesting, processing and distribution of the meat was done in full compliance with prescribed practices and procedures. The regulatory standards should meet or exceed those set out in the Recommended International Code of Hygienic Practice for Game of the CAC.

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[74] *FWCA, supra* note 62, s. 52.

[75] Ontario Ministry of Natural Resources , *Authorization of fish and wildlife fundraising dinners*, Policy: WilPp. 5.3.2 (9 March 1999).

[76] It is noted that the preparation of wild game meat at food premises contravenes the regulations under the *HPPA*, R.S.O. 1990, c. H-7.

The goal should be to ensure that any consumption of wild game other than by the hunter and his or her immediate family is subject to strict controls and measures to prevent harm to human health and limit the food safety risks associated with wild game meat.

To permit wild game dinners to continue, the prohibition against the preparation of wild game at food premises that is contained in the *Food Premises* regulation under the *HPPA* will have to be addressed.

6.9.1.6 Future of Wild Game Processing

Permitting wild game to enter provincially inspected abattoirs pits the risk of wild game contaminating inspected meat in the plants against the risks associated with poor and unsanitary processing of hunted wild game. On balance, I am content that the risk in permitting wild game into provincial abattoirs is acceptable so long as there is legislation and appropriate enforcement to require adherence to processes and procedures that ensure that the wild game is properly segregated from inspected meat.

The current legislation does not deal directly with the issue of wild game and, therefore, the only controls are by policy. If we continue to permit the processing of wild game meat in provincial abattoirs, then procedures and processes designed to limit the risks such as those set out in the current policy should be incorporated into the legislation or regulations to permit monitoring of the risk control measures and enforcement.

I recommend that the regulations under the *Food Safety and Quality Act, 2001* include a requirement that provincially licensed plants obtain permission to process wild game meat and that any processing adhere to standards similar to those in the current policy.

If wild game continues to be permitted into provincial abattoirs, I recommend that hunters be required by regulation to take training in the collection of pertinent information, safe dressing and transport procedures. This training could be added to the existing training required to obtain a hunting licence to hunt deer, moose, elk, and bear, or be provided by the hunter associations.

6.9.2 Ritual Slaughter

There are two general exceptions to standards required by the *MIA* and its regulations applicable to ritual slaughter performed in accordance with religious practice. First, the animals need not be rendered unconscious by a method set out in the regulations. Instead, it must be adequately restrained and slaughtered by means of a cut resulting in rapid, simultaneous and complete severance of blood vessels in a manner such that the animal loses consciousness immediately.[77] Second, the carcasses need not be refrigerated immediately after being dressed nor kept refrigerated until they leave the plant.[78] Ritual slaughter is performed in accordance with Islamic (*halal*) and Jewish (*shechita*) religious practices at several provincial abattoirs in Ontario.

Halal slaughter is more common than *shechita* slaughter in the provincial system. In order for meat to be *halal* (permissible for consumption under Islamic law), the slaughter of the animal from which the meat is taken must be conducted in a specific manner that involves:

- the name of Allah or the phrase "Bismallah" (in the name of Allah) being recited before the animal is slaughtered;
- the person conducting the slaughter must be a Muslim;
- the animals being slaughtered with compassion and mercy; and
- the instrument of slaughter (knife/blade) being sharp.

Shechita is the permitted method of animal slaughter according to Jewish law to produce meat for human consumption. *Shechita* is performed by a *shochet* who is trained in the laws of *shechita*, anatomy and pathology. The slaughter consists of an incision to swiftly sever the major structures and vessels at the neck which results in the animal losing consciousness and the ability to feel pain very quickly.

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[77] R.R.O. 1990, Reg.632/92 as amended to O.Reg.319/99, s.63. An almost identical exemption exists in the federal meat inspection legislation. *Meat Inspection Regulations*, 1990, SOR/90-288, s.77.

[78] R.R.O. 1990, Reg.632/92 as amended to O.Reg.319/99, s.25.

The information provided to the Review was that both Islamic and Jewish law require that animals be spared suffering in the slaughter process and be treated with respect and consideration. Jewish law also requires that an animal intended for food be healthy and uninjured at the time of slaughter. Due to this requirement, stunning by common methods which cause injury render an animal forbidden for food under Jewish law. An animal welfare expert in the U.S. does not argue against religious slaughter, but does advocate methods of such slaughter which provide for the most humane treatment of the animals.[79]

The food safety issues relating to religious slaughter are the same as with non-religious slaughter: proper training of staff and ensuring compliance with the standards. I believe the recommendations in this Report with respect to training of abattoir personnel and enforcement of standards address any concerns which arise with respect to such issues in this context.

6.9.3 Custom Slaughter

In Ontario, many small and medium-sized farms sell meat from their animals to local customers. The farmers take the animals to local provincially licensed abattoirs and pay for the animal to be slaughtered, and in some cases, processed into meat cuts, and then returned to the farmer for sale or personal consumption. Certain producers sell to small or specialized markets and must be able to guarantee that the product they take away from the abattoir is from the animal they delivered for slaughter.[80] This is called "custom slaughter" and is not a service provided by most federal abattoirs.

Several farmers and farm organizations advised that they rely on the existing geographically diverse network of small and medium-sized provincial abattoirs to provide the services they require for the direct marketing of their meat to the public. They asked that any changes to the system or standards not endanger smaller abattoirs. In my view, this can be accomplished without jeopardizing the primary goal of meat safety.

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[79] Dr. Temple Grandin, an animal welfare expert, proposes that a method of restraint of the animal be used while *shechting* that is easier, faster, causes less problems with blood flow and is a far more humane way to *shecht* than the shackling and hoisting method used by many. See http://www.grandin.com/ritual/kosher.slaugh.html.

[80] For example, if a farmer sells the meat on the basis that the animal was fed certain types of feed or was raised "organically", then the farmer must receive the meat from the animal delivered to the abattoir to be able to give that assurance.

6.9.4 Specialty Products

There are a number of specialty products which are permitted to be produced in provincial abattoirs due to flexibility in the inspection regime or slaughter and processing processes.

One example of such specialty products is undrawn dressed poultry (UDP).[81] Over the years, the public has preferred different types of poultry starting with live poultry, then UDP and presently, ready-to-cook poultry. Although most of the market now prefers ready-to-cook poultry, there is still some demand for UDP. UDP was exempt from mandatory inspection until amendments were made to the *MIA* regulations in 1992.[82] Individual poultry carcass inspection of all internal organs cannot be conducted on UDP. An inspection protocol was designed by OMAF to ensure safety, yet permit the poultry to remain undrawn. It is believed that there is no additional public health risk from UDP provided the birds are healthy and originate from healthy flocks. The protocol is based on a review of production data to ensure healthy flocks, *ante mortem* and external *post mortem* findings, and internal inspection of random birds from the flocks.

Other examples of specialty products which are prepared at provincial abattoirs in Ontario include rabbits, hide-on calves, paschal lambs and goats, singed goats, BBQ pigs, and by-product harvest.[83] Not all of these specialty products can be processed at federal abattoirs.

6.9.5 Conclusion of Abattoir Services

The provincially licensed abattoirs in Ontario provide services to producers which would not otherwise be available to them. The flexibility of the system, the geographical diversity of the plants and the ability to conduct custom work all differentiate the provincial abattoirs from their federal counterparts. There is also a potential for more illegal slaughter if access is not permitted for specialty products, ritual slaughter or custom slaughter. Therefore, the provincial abattoirs not only provide market access for these products, but also likely eliminate health risks associated with uninspected slaughter.

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[81] This product is also referred to as New York dressed poultry. Such poultry are not eviscerated in that the body cavity is not opened as with ready to cook poultry.

[82] O. Reg. 632/92.

[83] By-product harvest is the harvest of portions of the carcasses which are normally treated as inedible.

Chapter 7 - Disposal of Meat Production Waste 283

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Chapter 7 - Disposal of Meat Production Waste

7.1 Introduction

The production of meat across the farm to fork continuum produces not just meat for human consumption, but also waste. The nature and quantity of the waste varies at each stage, but includes the carcasses of dead animals, parts of animals which are treated as inedible, bones, hides and blood.[1] Animals die for a variety of reasons and their carcasses are a normal by-product of farm production.[2]

The quantity of meat production waste is staggering. Humans consume only a portion of a food animal. A significant portion of food animals become waste. Approximately 50-54% of each cow, 52% of each sheep or goat, 60-62% of each pig, 68-72% of each chicken and 78% of each turkey end up as meat consumed by humans with the remainder becoming waste after processing.[3] Based on mortality rates and livestock statistics in Ontario, it has been estimated that the annual mass of deadstock alone is greater than 86,000 tonnes. The meat waste from federal and provincial abattoirs in Ontario is believed to be 333,000 tonnes each year. This does not take into account other waste from meat processing which is also substantial.

The enormous volume of the waste makes the issue of the meat safety risks associated with its disposal an immediate, ongoing and serious one. In this chapter, I discuss the disposal of waste created in meat production and suggest improvements for the system.

7.2 Food Safety Issues

The primary food safety risk associated with disposal of meat production waste is the potential for pathogen and chemical contaminants being transferred to humans directly or through other animals. Scavengers including wild animals and vermin can feed on diseased waste and transmit the pathogens to pets and humans. Contaminated waste can also find its way into the food chain through the rendering process. Other risks include the potential for pollution of air, soil, surface water and ground water. I will not deal with the environmental issues except to the extent that they may impact meat safety and public confidence in the meat safety system.[4]

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[1] The waste is sometimes referred to as "animal by-products".

[2] Animals die from disease, accidents, heat distress, competition or essentially, old age. Dead animals are referred to as "deadstock" or "livestock mortalities". I will use the term deadstock.

[3] *The Animal By-Products (Scotland) Regulations 2003*, Training Seminar materials (Edinburgh, 4 November 2003); EU, *Questions and Answers on Animal By-Products* (Brussels, 6 May 2004), available from http://europa.eu.int/comm/dgs/health_consumer/library/press/press152_en.pdf [accessed 16 June 2004].

Some pathogens and chemical contaminants in meat production waste pose greater challenges to safe disposal than others. The best example are prions - the agents believed to cause transmissible spongiform encephalopathy diseases (TSEs) such as bovine spongiform encephalopathy (BSE) in cattle and variant Creutzfeldt-Jakob disease (vCJD) in humans. Prions do not appear to be destroyed or inactivated by most disposal methods that kill or inactivate other pathogens such as dry heat, disinfectants, boiling, cooking and irradiation and they can likely survive for extended periods of time in soil.[5] Although negligible, there is some risk of prions in certain waste from cattle. There are measures which can be taken to ensure that any prions in waste cannot transmit disease, but they are expensive and go far beyond what is normally done to minimize the risks from contaminants in waste.[6]

It is important that meat production waste containing or potentially containing prions and other pathogens or chemical contaminants be disposed of in a manner which will guard against the risks associated with them.

7.3 Existing Meat Production Waste Disposal Regime in Ontario

7.3.1 Legislation

Currently, there are several pieces of legislation that govern the disposal of waste from meat production in Ontario.

The primary statute governing disposal of meat production waste is the

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[4] Ontario, *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water*, (Toronto: Queens Printer for Ontario, 2002), Part 2.

[5] See Chapter 3.

[6] High temperature incineration and mixing the ash with cement. High temperature, high-pressure alkaline hydrolysis for over six hours under strict conditions. European Commission, Scientific Steering Committee, *Final Opinion and Report on a Treatment of Animal Waste by Means of High Temperature (150°C, 3 Hours) and High Pressure Alkaline Hydrolosis*, adopted 10-11 April 2003; European Commission, Scientific Steering Committee, *Opinion on Six Alternative Methods for Safe Disposal of Animal By-Products*, adopted 10-11 April 2003.

Dead Animal Disposal Act (*DADA*)[7] which regulates the disposal of deadstock which died for reasons other than slaughter. The *DADA* came into effect in 1960 and there have been few amendments to it.[8] This Act is designed to ensure that deadstock is segregated from both livestock and meat intended for human consumption to ensure that meat from deadstock is kept out of the food chain. The processing of any deadstock for sale for human consumption is specifically prohibited.[9] Meat from deadstock that is sold by brokers, receiving plants or rendering plants must first be cut into portions, denatured[10] and packaged with a marking of "not for human consumption."[11] The *DADA* and its regulation require that the owner of a dead animal dispose of the carcass within 48 hours of its death by using one of the following methods:

- burial, with a covering of at least 2 feet of earth;
- having the deadstock picked up by a licensed collector;
- delivering the deadstock in a vehicle belonging to the owner to a laboratory for examination, investigation or loss adjustment; or
- composting the deadstock on-farm and immediately covering it with at least 60 centimetres of sawdust or biodegradable material that is high in carbon content.[12]

The *DADA* only applies to horses, sheep, goats, swine and cattle. Poultry, farmed deer, ratites, bison and other types of livestock are not listed. This is probably a result of the legislation failing to keep pace with the changing face of the meat industry and should be remedied.

The Ministry of Agriculture and Food (OMAF) is responsible for administering and ensuring compliance with the *DADA* as well as the *Meat Inspection Act* (Ontario) (*MIA*).[13]

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[7] *Dead Animal Disposal Act*, R.S.O. 1990, c. D-3.

[8] *Ibid.*

[9] *Ibid.*, s.4(4).

[10] Denaturing is a process of colouring the meat such as by applying charcoal to clearly indicate it is not for human consumption.

[11] R.R.O. 1990, Reg. 263, amended to O. Reg. 525/96, s.20.

[12] *Ibid.* and R.R.O. 1990, Reg. 263, amended to O. Reg. 525/96.

[13] *Meat Inspection Act*, R.S.O. 1990, c. M-5.

The *MIA* governs the disposal of waste by abattoirs from slaughter and processing activities. The waste includes full carcasses or portions thereof which were condemned, animals found dead on arrival, animals euthanized due to health problems, portions of the carcass deemed inedible and blood. Under the *MIA* and its regulation, the waste must be disposed of:

- by delivery in a vehicle for which a marker has been issued under the *DADA* to a rendering plant;
- by burying it with a covering of at least 60 centimetres of earth;
- by incineration; or
- by any other method agreed to by the regional veterinarian.

The use and disposal of blood from animals is not regulated under the *DADA*, but there are provisions regulating its disposal under the *MIA* for abattoirs unless it is harvested in a safe manner in accordance with the *MIA* regulation for use.[14]

The permissible disposal methods for deadstock vary depending on the location of the animal at death. A producer cannot incinerate deadstock on-farm, but abattoirs may. Producers are allowed to compost deadstock, while abattoirs cannot unless they receive approval from a regional veterinarian.[15]

The *Environmental Protection Act* (*EPA*), administered by the Ministry of Environment (MOE), also affects the disposal of meat production waste.[16] Causing adverse effects on the environment by disposal of wastes and the discharge of contaminants in excess of prescribed limits is prohibited and approvals are required for waste disposal under the *EPA*.[17] However, animal wastes disposed of in accordance with normal farming practices and regulations under the *Nutrient Management Act, 2002* (*NMA*) and waste disposal systems for certain meat production wastes are exempt from those requirements.[18] Notwithstanding these exemptions, if disposal of meat production waste causes or is likely to cause injury, endangerment or damage, the MOE can take steps to require alternative means of disposal.[19]

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[14] *Meat Inspection Act* (Ontario), O. Reg. 632/92 s. 32.

[15] However, abattoirs that have been composting in the last three years have always had final written approval to do so.

[16] *Environmental Protection Act*, R.S.O. 1990, c. E.19.

[17] Adverse effects include injury or impairment of the safety of any person or rendering any property unfit for human use. *Ibid.*, s. 1.

Medical officers of health and public health inspectors have authority under the *Health Protection and Promotion Act* (*HPPA*) to issue orders to ameliorate or eliminate hazards to human health.[20] Meat processors inspected by public health inspectors are required to remove waste from the premises at least twice weekly and store the wastes in a manner which maintains the premises in a sanitary condition. Liquid waste is required to be disposed of in a sanitary way, but the disposal of meat waste is not regulated under the *HPPA*.[21]

The requirements for meat processors that are separate from abattoirs and those within abattoirs are inconsistent. There are limited disposal options available to the latter, but no restrictions on methods of disposal for the former even though there appears to be no reason to make any distinction.

Municipalities may accept or limit deadstock in their landfill sites and some have enacted by-laws regulating the disposal of meat production waste from businesses within their jurisdiction.

The Canadian Food Inspection Agency (CFIA) has authority under federal legislation to protect the national livestock herd and, in the event of an animal disease outbreak, may enter farms to take steps to dispose of carcasses which are or are suspected to be diseased or contaminated.[22]

7.3.2 Licensing

There are four types of licences that can be issued under the *DADA*: broker, collector, receiving plant, or rendering plant. The Director of the Food

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[18] Wastes resulting from farm operations including condemned animals, animal parts from provincially or federally inspected abattoirs and deadstock governed by the *DADA* need not obtain the approval normally required for waste disposal sites or systems. *General – Waste Management*, R.R.O. 1990, 347, amended to O. Reg. 326/03, ss. 1, 3(1) and *Nutrient Management Act*, 2002, S.O. 2002, c-4.

[19] *EPA, supra* note 16, ss. 1, 6, 14, 17 & 18.

[20] *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7, ss. 1 & 13.

[21] *Ibid.*, s. 57.

[22] *Health of Animals Act*, S.C. 1990, c.21, ss. 38-49.

Inspection Branch of OMAF issues licences if the licensees apply, pay the annual fee,[23] and meet the regulatory requirements. Licences issued are subject to suspension or cancellation for breach of any of the provisions of the *DADA* or its regulation, with hearings and appeal rights similar to those for abattoirs. Several licensees hold more than one category of licence and are involved in several areas of the deadstock and waste disposal industry.

Deadstock collectors pick-up and collect deadstock from farms, livestock sales barns and abattoirs. Deadstock collectors are limited to giving, selling or delivering deadstock to receiving or rendering plants. A receiving plant is a facility to which deadstock can be delivered for the purpose of obtaining and selling the hide, skin, fats, meat or other product of the deadstock and then, burying the remains of the carcasses or delivering them to a rendering plant. At rendering plants, deadstock and other meat production waste is buried or processed into protein and fat products. Both the federal and provincial governments license rendering plants in Ontario.[24]

A broker is permitted to purchase and resell meat obtained from deadstock in an uncooked form, not for human food. There were only three brokers engaged in the deadstock meat industry as of April 2004. As will be discussed later, the market for deadstock meat is limited at present. There are provisions in the *DADA* requiring the denaturing and labelling of deadstock meat to ensure that it is not used for human consumption. These provisions should be carried into any future legislation replacing the *DADA* in case the market for deadstock meat recovers and to continue regulation of the limited amount of deadstock meat that is still being produced and sold.

In Ontario, relationships between businesses in the deadstock and meat waste industry licensed under the *DADA* and businesses that slaughter animals, process meat, or sell meat for human consumption are prohibited.[25] The operator of an abattoir, meat processor or meat retail premises cannot, for example, hold a licence under the *DADA*.

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[23] The annual licence fees for *DADA* licence holders are $10 for collectors, $100 for brokers, $50 for rendering plants and $50 for receiving plants.

[24] *Health of Animals Regulations*, SOR / 91-525, as amended, s.165, under the *Health of Animals Act*, S.C. 1990, c-21.

[25] *DADA*, *supra* note 7, s. 13.

The number of licences issued under the *DADA* from 1998 to 2004 is summarized in the chart below.[26]

	Number of Licensed Operators	Number of Broker Licences	Number of Collector Licences	Number of Receiving Plant Licences	Number of Rendering Plant Licences
Dec. 1998	45	7	40	26	5
Dec. 1999	40	7	35	23	5
Dec. 2000	40	4	33	23	4
Dec. 2001	38	5	31	25	4
Dec. 2002	34	4	30	21	4
Dec. 2003	34	4	29	21	4
Mar. 2004	31	3	27	21	4

7.3.3 Inspection and Audit

There is a dual inspection system in place to ensure that deadstock and meat waste are properly disposed of in Ontario. The inspection of meat waste processing plants, abattoirs and meat processors provides multiple barrier protection of the human food chain.

Inspectors appointed under the *DADA* have the authority to enter and inspect any building or vehicle used in collecting, transporting or processing of deadstock or meat from deadstock, require production of records and seize, remove and detain any deadstock or meat from deadstock.[27] But *DADA* inspectors do not have any power to stop a *DADA* licensee from operating, issue orders, issue tickets, or lay charges for violations of the *DADA* or its regulation.

The inspection of *DADA* licensees is conducted by the deadstock advisor, a full-time position created at OMAF about three years ago. The advisor inspects licensed operations on a frequency based on the advisor's risk assessment of the operation,[28] reviews inspection reports from CFIA inspections of the rendering plants, inspects vehicles used by deadstock collectors, and responds to complaints regarding the disposal of deadstock and abattoir waste. In the past few years, a number of meat inspectors across the province have also been trained and appointed under the *DADA* to respond to complaints regarding deadstock disposal.[29] The number of complaints handled has substantially increased over the years – 25 in 2001, 63 in 2002, 162 in 2003 and on pace for over 200 in 2004.[30]

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[26] A number of separate operations are operated by the same or related persons or companies.
[27] *DADA*, *supra* note 7, s. 15.
[28] Monthly or quarterly for high risk, semi-annually for medium risk and annually for low-risk.

There is no formal audit of operations licensed under the *DADA*, however, the deadstock advisor's plant attendances are conducted in a manner similar to an audit. The advisor determines whether the licensees are meeting the standards of compliance developed from the requirements set out in the *DADA* and its regulation; provides a copy of the advisor's report to the operators; sets dates by which the non-compliance must be corrected; and, returns to verify that corrective action has been taken.

Unlike meat inspectors who record inspection information and auditors who record annual audits of abattoirs on a computer system known as the Food Safety Decision Support System (FSDSS), the inspections and audits of *DADA* licensees is primarily recorded on paper. This does not permit the information to be easily searched, accessed by others, or analyzed. The FSDSS should be modified to permit the entry of *DADA* licensee inspections, corrective action dates, audits and actions taken to respond to disposal complaints.

In addition to deadstock inspectors, meat inspectors and auditors of abattoirs are expected to review and inspect the disposal procedures followed by abattoirs to monitor compliance with the *MIA* regulation. Public health inspectors are directed to review waste disposal during their routine inspections of food premises[31] and monitor compliance with the sanitation requirement of the *Food Premises* regulation.

7.3.4 HACCP, Training, Biosecurity and Traceability

There is no mandatory or voluntary HACCP-based program for licensees under the *DADA*. The HACCP Advantage Program was developed for a broad spectrum of operations that process food for human consumption, not operations processing waste that must not go into the human food chain. However, the rendering plants which process most of the Ontario waste have adopted HACCP-based programs.[32]

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[29] In addition, where there are not sufficient meat inspectors, some agricultural staff of OMAF in the northern areas of the province were also trained and appointed under the *DADA*.

[30] The prediction of 200 or more complaints in 2004 is based on 90 cases in the first 4 months.

[31] The MOHLTC Food Premises Inspection Report – Establishment Sanitation, Design and Maintenance Items form used by public health inspectors lists waste disposal as an item to address in the inspection of a food premises.

There is no specific training for deadstock and disposal industry employees, managers or operators. However, most of the existing licensees have been in the business for many years and I did not hear any concerns regarding training within this industry.

The transportation of deadstock and other meat production waste raises biosecurity concerns. Vehicles used to transport waste travel to many locations including farms, sales barns, meat processing plants, receiving plants and rendering plants. Vehicles may unwittingly transfer disease-causing agents. Without biosecurity protocols in place, there is a risk of disease transmission. Further to my earlier biosecurity recommendation, OMAF should develop a biosecurity plan which includes the meat production waste industry. In addition, the regulation of transportation should include stringent requirements for cleansing and disinfecting all vehicles and equipment used to transport deadstock and meat production waste as well as disinfection and hygiene requirements for the clothing of persons involved in such transportation.

Record keeping requirements for the disposal of meat production waste are uneven. Abattoirs are required to keep limited records and *DADA* licensees are required to keep detailed records,[33] but there is no requirement for food premises to keep any records. Further to my earlier recommendation, the traceability system should include the meat production waste disposal industry as part of that system. The traceability system should be designed to ensure that sufficient information is collected and retained about the disposal of waste to permit thorough and effective responses to food emergencies.

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[32] As required by the CFIA. In addition, the three largest rendering plants which render materials from Ontario have been audited by a third party auditing company and found to be meeting the conditions for proper implementation of the U.S. ruminant to ruminant feed ban - Rothsay Dundas, Rothsay Moorefield and Lomex, Inc. Montreal, http://www.animalprotein.org/news_articles/audit.htm [accessed 20 May 2004].

[33] Under the *DADA*, collectors, operators of receiving plants and operators of rendering plants are required to make and keep records of the deadstock received and the methods of disposal for at least 12 months. A broker is required to keep records of all received meat from deadstock and of the disposal thereof for 12 months. *DADA*, *supra* note 7, s. 14.

7.3.5 Disease Surveillance of Deadstock

It is very important that there be access to deadstock to test for diseases in the animal population in Ontario to determine the level of disease and potential risks to human health. Without such knowledge, the food safety system cannot address the potential risks. If animals that died from disease are buried or composted without any determination of the disease, then the authorities may remain unaware of diseases spreading in the animal population and be unable to address their risk. Centralized disposal options provide a significant benefit by permitting access to carcasses for testing. In addition, education of producers and legislative authority to permit testing are necessary for any effective surveillance program.

7.4 Existing Methods for Disposal of Meat Production Waste

7.4.1 Introduction

Each of the disposal methods used in Ontario has advantages and disadvantages. The use of any of the disposal methods can be problematic due to the "not in my backyard" attitude (NIMBY) held by many people [34] and the use of on-farm disposal methods may make it difficult to insure or sell the land. [35]

No one knows the methods used or the location of all disposed deadstock and meat production waste in Ontario because farmers, feedlots and meat processors do not require approvals and do not keep records.

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[34] Few people would be happy to have deadstock or other meat production waste disposal next to their property and many will oppose it.

[35] Some insurance companies may refuse farm property coverage if deadstock is buried on the land allegedly due to a fear of liability from potential water contamination.

The following table summarizes advantages and disadvantages of the disposal options permissible under the *DADA* and *MIA*:

DISPOSAL METHOD		ADVANTAGES	DISADVANTAGES
PRODUCER	Burial	- Inexpensive, if suitable land available	- Risk of disease transmission and pollution - It does not destroy prions or pathogens - It may reduce value of land - It requires substantial land and earth moving equipment for larger animals
	Compost	- It may destroy some pathogens (partial sterilization) - It is usually cheaper than rendering or incineration - It makes use of nutrients if compost is used as fertilizer	- Risk of disease transmission and pollution - It does not destroy prions and some pathogens - It requires significant land, earth moving equipment and material high in carbon (ex. saw dust, wood chips) - It may reduce value of land - The compost must be disposed of and may include portions of bones
	Rendering	- It destroys most pathogens - Significantly reduces volume - It can recycle the waste	- It does not destroy prions (BSE) - It is costly unless costs are covered by income from products - It requires collection and storage of waste
ABATTOIR	Burial	- Same as above	- Same as above
	Incineration	- Destroys most pathogens (sterilizes the waste) - At high temperatures (1000°C) inactivates prions - Significantly reduces volume - Some of the heat created may be able to be recycled	- If not done properly, may pollute the air - The equipment, operation and the maintenance of incinerators is expensive - The ash has to be disposed of after the incineration process - The nutrients are wasted
	Rendering	- Same as above	- Same as above

7.4.2 Burial

The only restriction on burial is the requirement for two feet of earth cover. This method is used for deadstock and other meat production waste by producers, abattoirs and deadstock collectors. The effects on water and soil and the risks of pathogen transmission have not been fully studied.

7.4.3 Composting

Many farmers and an estimated 15 to 20 abattoirs are currently composting waste. The cost to compost has been estimated to be approximately one-third the cost of rendering.[36] However, the composting process for full carcasses or significant quantities of waste takes several years, is labour intensive and may be ineffective in disposing of hides and bones. The permissible uses of the final product – the compost – are still uncertain and may depend on the nature of the compost.[37] OMAF is presently undertaking a study to determine whether this method is safe and practical for farmers and has studied an 18 month project conducted by a deadstock collector. Initial results from the studies show that the compost process is effective to break down the waste, kill some pathogens and produce final compost which is relatively safe.

7.4.4 Incineration

Currently, incineration is not widely used in Ontario and where used, only smaller quantities of waste are involved as there are no large or centralized units in operation. OMAF is presently undertaking a study to determine whether this method is safe and practical for farmers. Initial results from tests of small incineration units show significant destruction of pathogens and emissions within the permissible air quality standards, however, this method requires substantial capital and operating costs.

7.4.5 Rendering

Rendering is a process which is applied to materials derived from slaughter, packing, processing, food preparation and deadstock, involving cooking, removing the moisture and separating the materials into sterile animal protein meals and fat products such as tallow, meat and bone meal (MBM), meat meal,[38] blood meal and feather meal. The muscle, fat, bones and other animal tissues are changed into a protein rich substance which looks like sand or soil - a much safer, more easily stored and less objectionable form.

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[36] For a deadstock collector, not including any potential use or sale of the finished compost.

[37] Certificates of approval or approved nutrient management plans may be necessary to apply any of the final compost to land and the application to land may be restricted to land which is not used for crops of human foods. Ontario Ministry of Environment and Energy, *Interim Guidelines for the Productions and Use of Aerobic Compost in Ontario*, (Queen's Printer for Ontario, 1991), reprinted in Environmental Choice Program Guideline ECP-23-90 for Compost (August 1995). Central composting facilities require EPA and *Ontario Water Resources Act* approval unless exempt. The composted material must meet Ontario compost guidelines if it is to be used on an unrestricted basis.

[38] Meat meal is less than 4% phosphorous and MBM is more than 4% phosphorous.

Unlike raw waste materials, the products derived from rendering can be stored for long periods of time. The temperature and length of the rendering process kills or inactivates traditional disease causing organisms and for years was viewed as a stage at which the disease transmission cycle could be disrupted.[39] In the past, protein and fat products were seen as sterile, although subject to new contamination if not properly stored or handled.

Traditionally, rendering has produced valuable and marketable protein and fat products from meat production waste, including deadstock. Rendering has recycled what would otherwise have been substantial amounts of waste.

7.4.5.1 The Rendering Industry

By one estimate, 50,000 tonnes of materials are picked up each year for rendering in Canada.[40] The rendering industry in North America recycles over 20.8 million tonnes of perishable material generated by livestock and poultry meat/poultry processing, food processing, grocery and restaurant industries each year.[41] One of the rendering companies in Ontario estimates that it recycles 6,800 tonnes per week of meat scraps and cooking oils from restaurants, butcher shops, supermarkets and abattoirs which is equivalent to approximately 17,500 tractor trailer loads each year.[42] Many of the abattoirs have rendering companies pick-up waste either by leaving a truck at the premises or on an arranged schedule. The rendering companies also pick-up waste from deadstock receiving plants, meat processing plants and butcher shops.

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[39] Fats and Proteins Research Foundation, Inc., *Industry Profile* (2001), available from http://www.fprf.org/profile/index.htm [accessed 8 June 2004]; Food Safety Network, *Rendering fact Sheet*, (University of Guelph, 4 September 2003).

[40] Alberta Agriculture, Food and Rural Development, *Rendering Fact Sheet* (23 May 2003).

[41] National Renderers Association, *North American Rendering: A Source of Essential, High-Quality Products*, available from http://www.renderers.org/links/ [accessed 8 June 2004].

[42] Rothsay, *About Rothsay*, available from http://www.rothsay.ca/dundas.html [accessed 20 May 2004]

7.4.5.2 Markets for Rendering Plant Products

In the past, the largest market for animal fats and protein has been animal feeds. While it typically constitutes less than 5% of the ingredients in feed. MBM, is a source of protein and other key nutrients whereas the feed additive competitor, vegetable protein[43] usually contains few critical nutrients other than protein. Blood meal, obtained from processing clean, fresh animal blood and poultry and feather meal are also protein feed additives. Other markets for meals include fuel for incinerators and additives in concrete mixes.[44]

Rendered animal fats have a variety of uses.[45] They have been used in oil lamps, candles and in the manufacturing of soap for an estimated 2,000 years. By-products from tallow are used in a wide variety of modern products[46] and recently fats have been utilized in the production of biofuels.

Biofuels include biodiesel for use in vehicles and direct combustion fuels for use as liquid burner fuel in heaters. Tallow, grease and poultry fats can all be used as liquid burner fuels.[47] Biodiesel can be made from animal fats or recycled restaurant greases. Studies have shown that biodiesel made from animal fats has high lubricant qualities, requires few, if any, engine modifications, reduces air pollution, improves energy efficiency and reduces engine maintenance.[48] Consumption in Europe is about one billion litres per year whereas in the United States (U.S.) less than 75 million litres per year are used.[49] In Canada, some companies and public agencies are running diesel trucks or buses on a blend of biodiesel.[50] The biodiesel industry is still in its infancy in North America due, in part, to the high cost of production. The only biodiesel plant in this part of Canada is operated by a rendering company in Montreal.

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[43] Nutrients such as phosphorous and calcium are in MBM.

[44] The ash after meal is incinerated can be combined with cement to make structural concrete.

[45] The uses depend on the category and quality of fat such as bleachable fancy tallow, choice white grease, edible tallow, feed grade animal fat, poultry fat, tallow and yellow grease A or B.

[46] The by-products include oleic acid, stearic acid, glycerine and linoleic acid. Oleic acid is used in cleansing creams, cosmetics, lubricants, textiles and shampoo. Stearic acid is used in rubber, tires and lubricants. Glycerine is used in adhesives, anti-freeze, cosmetics, explosives, leather tanning, metal processing and resins. Linoleic acid is used in paints and lubricants. Alkyd resins provide versatile low cost paints and varnishes. U.K., *The Inquiry into BSE and variant CJD in the United* (1 September 2000), Vol. 16, Ch. 4 & Vol. 7, Ch. 2; S. Woodward, *One Cow, Hundreds of Uses*, Newhouse News Services (2004), available from http://www.newhousenews.com/archive/woodward011204.html [accessed 10 June 2004].

[47] G. Pearl, Fats and Proteins Research Foundation, Inc., *Non-Feed and Bioenergy Uses for Rendered Products*, presentation at 7th International Symposium Australian Renderers Association (October 2003), p. 6.

[48] In a study involving biodiesel as a blend with petrodiesel in city buses in Montreal, animal fat and recycled restaurant grease provided biodiesel of superior or equal quality to soybean oil in almost all categories and significantly reduced emissions.

7.4.5.3 Recent Events Affecting the Rendering Industry

The discovery of BSE in cattle across the world and in North America has had a considerable impact on the rendering industry. It is believed that BSE can spread among cattle when they consume prions from carcasses of other cattle found in the MBM in their feed.[51] There is evidence that prions are not inactivated or killed by the rendering process. Prior to BSE, the products from rendering were thought to be free from pathogen contamination, but no longer. Notwithstanding the extremely low risk of such products containing prions in North America, the impact of reduced public confidence and protective regulatory measures have significantly affected the rendering industry.[52]

As a preventative measure, MBM containing any materials from ruminants was banned as an ingredient in ruminant feed in the U.S. and Canada in 1997.[53] This ban eliminated a large portion of the market for MBM. On May 20, 2003, after the discovery of BSE in one cow in Alberta, the U.S. closed the border to ruminant products from Canada, including rendering products such as MBM and tallows made from ruminant waste.[54] This further ban eliminated an export market for MBM and tallow, which by one estimate, amounted to 40% of MBM and 80% of tallow produced by Canadian rendering companies. There has since been some discussion of whether MBM should be banned from all animal feeds.

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[49] G. Pearl, Fats and Proteins Research Foundation, Inc., *Non-Feed and Bioenergy Uses for Rendered Products*, *supra* note 47, p. 5.

[50] Biodiesel does not stay in the requisite liquefied state at low outdoor temperatures, as experienced in much of the North American climate and, as a result is usually blended with petroleum diesel. See http//www.torontohydro.com/corporate/initiatives/green_fleet/index.cfm, http://www.greenincubator.com/aboutbiodiesel/SudburyStar7-18-03.PDF, http://www.thesoydailyclub.com/thesoydailybackissues/brampton7112002.asp, http://www.cbc.ca/consumers/market/files/cars/biodiesel/facts.html [accessed 20 May 2004].

[51] Ruminant as defined in the U.S. legislation and *Health of Animals Regulation* includes animals with multiple chambered stomachs such as cattle, buffalo, sheep, goats, deer, elk, llamas, camels and antelopes.

[52] There have been three cases of BSE diagnosed in cattle in North America in comparison to over 182,000 cases in cattle in the U.K.

[53] In 1997, amendments to the U.S. and Canadian legislative schemes implement an indigenous mammalian-to-ruminant feed ban. The ban includes protein that originated from a mammal, other than a porcine or an equine, but does not include milk, blood, gelatine, rendered animal fat or their products, see *Health of Animals Regulations*, C.R.C., c. 296, s.162 and regulation *Animal Proteins Prohibited from Ruminant Feed*, 21 CFR §589.2000.

The rendering industry has modified its business practices to maintain its revenue streams based on both the current and potential bans. They are no longer paying operators for waste. Instead, renderers commonly charge fees for removal of waste. The fees for abattoirs and deadstock collectors have been considerable.[55] Revenue from fees does not replace the income from lost markets and rendering companies may not be viable unless new markets for their products are discovered or former markets restored. To increase the marketability of their products, the rendering companies have refused to accept waste which may give rise to a perception that the products are not sterile or safe.[56] In addition, they are segregating types of waste for processing - bovine/deadstock at one plant and porcine/poultry at another. Poultry meal does not give rise to the same concerns about the transmission of BSE and may still be considered as sterile and safe.

7.4.6 Deadstock Collection, Transportation and Receiving

Without the collection of deadstock, the centralized methods of disposal such as rendering cannot be used. In some jurisdictions, deadstock collectors are the rendering or related companies. However, in Ontario, most deadstock collectors are not related to a rendering company.

7.4.6.1 Deadstock Collectors and Receivers

Only licensed deadstock collectors may engage in the business of collecting deadstock. The *DADA* regulation prohibits the transporting of deadstock except in a vehicle for which the Director of OMAF's Food Inspection

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[54] The prohibition included MBM, meat meal, bone meal, blood meal, protein meal, regardless of species of origin, pet food (unless it was non-mammalian origin), ruminant offal, ruminant glands and processed ruminant fat, processed fats and oils and tallow (except for tallow derivatives), but not ruminant hides. See http://www.aphis.usda.gov/1pa/issues/bse/bse canada_memo.html.

[55] $24,000 per year for average to busy abattoirs and $200,000 per year for busy collectors.

[56] Including refusing carcasses and waste containing certain drug residues, road kill and hunted wild game which have unknown disease risks and portions of animal carcasses which are at higher risk of containing prions of any TSE diseases.

Branch has issued a "marker."[57] Vehicles are required to meet certain construction and maintenance standards.

While declining in recent years, deadstock collectors in Ontario in the past, have collected substantial quantities of deadstock from farms, livestock community sales and abattoirs. Many have been in the business for decades.

The following table lists the number of deadstock picked up by collectors in 1998 and 2002:[58]

ANIMAL SPECIES/TYPE	DEADSTOCK COLLECTED	
	1998	2002
Cattle	35,565	31,533
Calves	75,375	56,439
Swine	200,750	185,569
Small Ruminants	368	124
Horses	2,499	2,712

In March 2004, there were 11 deadstock collectors operating in Ontario. Collectors in the western area of the province pick-up approximately 89% of all deadstock collected in Ontario.[59] There are no licensed collectors in northern Ontario.

7.4.6.2 Markets for Receiving Plant Products

Several of the deadstock collectors also operate receiving plants. At those locations, deadstock is stripped of their hides, meat is taken from the carcasses and then, the remainder of the carcasses are usually sent to rendering plants. The three products marketed by deadstock receivers are hides, rendering materials and meat. Revenue derived from the products sold by receiving plants has traditionally covered the costs of the collection of the deadstock.

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[57] R.R.O. 1990, Reg. 263, amended to 535/96, s.1.

[58] Ontario Animal Health Surveillance Network, OMAF, *Report of the Ontario Animal Health Surveillance Network*, 2002 & 2003.

[59] The operating costs for eastern Ontario collectors are higher than for western Ontario collectors due to lower livestock densities, a larger area to cover and inconsistent product. In the industry, collectors east of approximately Highway 400 are referred to as "eastern collectors."

7.4.6.3 Recent Events Affecting the Deadstock Industry

Historically in the deadstock industry, there have been cycles of declines and growth. However, recently, markets have almost disappeared and there is little hope of much growth in the foreseeable future.

In the last ten years, deadstock collectors and receiving plants have gone from earning approximately one-tenth of their income from the sale of rendering materials to paying as much as one-fifth of their income in rendering fees.

Until May 2003, meat from the deadstock was sold by the deadstock industry for pet or zoo animal food. Revenue from meat sales accounted for about one-quarter of the revenue of some collectors. The pet food market had substantially decreased over the last two decades and by early 2003, only one major pet food purchaser of deadstock meat remained. The final blow to this market occurred on May 20, 2003 when the U.S. closed its border to deadstock meat and thereby, to the last major pet food purchaser. The market for meat from deadstock has been almost eliminated and presently there is little hope for recovery.

In the past, the sale of cattle hides amounted to more than half of some collector's revenues. The value of hides has fluctuated over the last decade, however, since the discovery of BSE in Alberta in May 2003, the market has been in decline. There are less than a handful of hide buyers and Europe has recently threatened to close its market to Canadian cattle hides.

The amount of deadstock accepted by rendering companies has substantially decreased in the past 5 years for a number of reasons. The rendering industry in Ontario banned deadstock containing a popular antibiotic medication from their facilities in 2001 and expanded the ban to several related antibiotic medications in 2002.[60] These bans reduced the number of cattle and calves picked up and delivered to rendering plants by as much as 20 percent. In mid-2001, the rendering industry banned wastes from certain types of animals that are susceptible to diseases similar to BSE or have unknown disease histories.[61] Rendering operations also refuse to accept carcasses which have been tested for BSE before the results are known. It has been estimated that 9,000 tonnes of deadstock and abattoir waste are diverted from rendering to other disposal options each year in Ontario.

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[60] The chemical residues of the medications are not eliminated or reduced by the rendering process. The levels in the MBM and tallow after processing were higher than permitted.

The deadstock collection and receiving businesses have struggled to stay in business by reducing costs and seeking funding to replace the revenue they used to earn from their products. To contain expenses, some of the businesses have limited the areas they service while others have stopped deboning deadstock except to reduce rendering material volume. Collectors have sought funding from both the users of their service and the government.

Some collectors introduced user fees as a source of income approximately six years ago.[62] Unfortunately, user fees constitute additional costs to producers who are already suffering from lower livestock returns. The experience of many deadstock collectors has been that the volume of animals collected decreases considerably if any fee is charged at the time of pick-up. User fees have only replaced around one-quarter of the collectors' previous revenue.

In addition to charging for their service, the collectors and receivers have asked government for funding, with limited success:

- a group of six of the collectors in eastern Ontario formed the Eastern Ontario Farm Recycling Association (EOFRA) and approached the provincial government for short-term emergency funding or a loan guarantee, but the request was denied;
- one deadstock collector asked municipalities in which deadstock was collected to contribute funds, but the request was denied;
- in 2001, provincial funding was provided, primarily for purchases of equipment, under the Livestock Mortality Recycling Project. In 2003, the funding was expanded to include a percentage of

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[61] Including deer, elk, sheep lamb and goats, mink, pets, zoo animals and, road kill.

[62] Each collector charges different user fees, but typically it is a fixed amount per animal collected. Most of the collectors in western Ontario did not introduce user fees until 2003.

rendering costs and $50 per invoice for pick-up fees charged to users. The funds from this program were exhausted by mid-January 2004. Even with these funds and user fees, some collectors were unable to meet expenses;[63]

- in April 2004, the Ontario Cattlemen's Association and the Dairy Farmers of Ontario agreed to provide funding for 80 percent of the user pick-up fee charged for bovine pick up only.[64] This program is scheduled to last until October 2004, but some collectors expressed doubts that the funding would last to the end of June. The program will not assist collectors for the pick-up of non-bovines;

None of these measures have been successful to ensure the continued existence of a network of deadstock collectors across Ontario. Several collectors and receiving plants have been losing money over the last 6 years even with the assistance to date and have no current hope of becoming profitable. Unless the markets change unexpectedly and drastically, deadstock collection and receiving plants will remain, as they have become, a waste removal service and not a self-sufficient industry. Sources of replacement revenue and assistance to date have been deficient. Two collector and receiving plants ceased operations recently. Some stakeholders predict that all collectors and receivers who are not associated with rendering companies will fail by October 2004 unless remedial steps are taken immediately.

If nothing is done to rescue the deadstock collection industry, then the consequences will likely include piles of abandoned carcasses. Health risks, a loss of public confidence and long-term harm to the environment will, in that event, follow. There is a public benefit to the collection of deadstock similar to the benefit from the collection of household garbage. In addition, without deadstock collectors, there is no means by which to implement centralized disposal methods and given the grim state of the business, the prospect of attracting others to the industry is unlikely.

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[63] The support programs have treated all collectors equally, however the eastern collectors started being charged rendering fees over three years before the western collectors, the eastern collectors have a lower volume and the eastern collectors have larger areas to cover. The funding initially ran out by August or September 2003, but additional funding was provided on two occasions. The program officially ended in March 2004, however the collectors received funding for the months only up to mid-January 2004. Some of the funding received was retroactive and so, was not received for upwards of two months. The percentage of rendering fees covered was as low as 15 percent in some cases.

[64] The new program, Bovine Mortality Recycling Assistance Program is funded with $1.3 million out of $3 million in funds given to OCA from OMAF to support steps to address issues resulting from the discovery of BSE in one cow in Alberta. The program will cover fees going back to March 1, 2004 which means that the collectors will not have received any support for half of January and the month of February.

I adopt the recommendation of the Expert Advisory Panel and recommend that the provincial government provide interim financial support to the deadstock collectors and receiving plants to see them through the present crisis and ensure collection of deadstock continues in the future.

The funding should recognize the regional differences between the collectors and should be designed to ensure that the collectors and receiving plants are able to realize a reasonable return on their business investment.

7.4.6.4 Producer Transport

In 2000, OMAF agreed to permit producers to transport their own deadstock in eastern Ontario[65] as a pilot project, even though such transportation is in direct contravention of the *DADA* and its regulation. The pilot project was limited to the delivery of deadstock to licensed receiving plants with a tag listing the owner's name and telephone number to permit tracing. OMAF advised producers that their vehicles were required to have a barrier to prevent leakage of liquids, construction that facilitated effective cleaning and sanitation, and a cover over the deadstock. OMAF further required that no food for human consumption or live animals be transported in the same vehicle and that delivery be made as soon as possible after death of the animal(s) with a limit on the number of animals per trip.[66] The "pilot project" continues!

Transport of deadstock by producers is controversial because there are a number of concerns and health risks associated with the practice. Some producers have dropped deadstock off at receiving plants after hours, without tags and without paying and many producers do not comply with the required transport procedures. Enforcement is problematic because the requirements communicated by OMAF to producers have no legislative force and the powers under the *DADA* are limited.[67]

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[65] The pilot project was not offered to producers in western Ontario, however I was told during the course of the Review that producers in western Ontario have also been transporting their own deadstock.

[66] OMAF, *Managing On Farm Mortalities* (1 June 2001), available from http://www.gov.on.ca/OMAFRA/english/livestock/swine/facts/info_pm_mortal.htm [accessed 31 May 2004].

I recommend that the Ministry of Agriculture and Food discontinue the pilot project which permits producer transport of deadstock and any illegal deadstock transportation be treated as such until appropriate legislative amendments are made to regulate the transport of deadstock by producers to receiving plants and resources are in place to enforce the regulatory standards.

7.4.7 Other Disposal Methods

In addition to the legislative disposal methods outlined earlier, some producers and abattoirs are using "dumping" or landfills for disposal.

"Dumping" is also called "au naturel" and refers to disposal by leaving waste in fields, on unused acreage, or in waterways.[68] I was told by several stakeholders that this method is used in Ontario, especially in northern areas of the province which are not presently serviced by the deadstock industry. There have been a number of serious dumping incidents reported in the media in the past year. For example, in May 2003, it was reported that up to 10,000 dead pigs were found in various stages of decomposition in multiple locations throughout southwestern Ontario.[69]

Although landfills have been used for the disposal of deadstock and meat waste, this is not common as most landfills are reluctant to take meat production waste.[70] Disposal in landfills has been treated as equivalent to "burial", but it is not and should not be treated in that fashion as the burial requirement for two feet of earth within 48 hours would not likely be met. The use of landfills carries similar risks to those of dumping, but to a lesser degree as landfills are subject to environmental regulation. Landfills can be useful to dispose of substantial quantities in emergencies.

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[67] Inspectors can enter and inspect a vehicle used in the transporting of deadstock, but they do not have authority to stop vehicles and cannot issue orders, tickets or lay charges to immediately address any problems identified. *DADA, supra* note 7, s. 16(3).

[68] Some use the term dumping to refer to instances of people leaving waste on other people's property without permission. The term is used here to refer to any disposal of meat production waste above ground or in watercourses.

[69] Ontario Society for the Prevention of Cruelty to Animals, News Release, *77 Criminal Charges Laid in 'Animal Welfare Disaster'* (14 October 2003); S. Morse, *77 Charges of Cruelty After Thousands of Pigs Found Dead*, Farm Animal News (21 October 2003); K. Pedro & R. Richmond, *Investigators blocked for month as pigs die*, London Free Press (16 October 2003); K. Pedro, *Pigs Found Dead, Dying, 7 Men Have Been Charged Over the Grim Discovery Involving 10,000 Animals*, London Free Press (15 October 2003).

7.5 Emergency Disposal

7.5.1 Introduction

No matter how strong the system, unexpected events will still occur. Emergencies can occur at any point in the meat production continuum, but frequently involve disposal issues. One such emergency is an animal disease outbreak which usually requires the mass disposal of infected or potentially infected animals. Other circumstances which may give rise to mass disposal of livestock include natural disasters such as fire, flood, and extreme weather.

Animal disease outbreaks have tested the emergency response preparedness of many jurisdictions. During outbreaks, decisions must be made quickly about where and how to dispose of carcasses to limit the spread of the disease and prevent danger to the public or the environment. For example, in 2001, over 250,000 animals were destroyed and disposed of in the Netherlands and over 4 million in the United Kingdom (U.K) due to a foot and mouth disease outbreak; since 1986, over 6 million cattle have been disposed of in the U.K. due to BSE; and 19 million birds were recently disposed of in British Columbia as a result of an avian flu influenza outbreak.

The effects of an emergency can be reduced by a coordinated, measured, immediate response and ongoing follow up. To ensure that the food production system in Ontario can provide safe meat at all times the provincial food safety system must be prepared for and able to respond to emergencies.

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[70] The approval for some landfills would prohibit accepting deadstock.

7.5.2 Emergency Authority and Planning

In Ontario, the province and municipalities have the legislative authority to declare emergencies, develop emergency management plans and participate in a response to an emergency.[71] OMAF has been assigned the responsibility for agriculture and food emergencies. MOHLTC has been assigned large-scale human health emergencies and epidemics. Both OMAF and MOHLTC have prepared emergency plans dealing with their area of responsibility which is an important first step. The plans do not, however, deal specifically with certain issues such as mass carcass disposal in the event of an animal disease outbreak.

The federal government has jurisdiction and authority over emergencies which affect more than one province and emergencies affecting the entire nation.[72] It has developed a Food and Agriculture Emergency Response System (FAERS)[73] designed to respond to abnormal situations requiring prompt action in order to prevent injury to people, livestock, property or the environment. FAERS involves a series of plans and procedures to link existing structures in the federal government, provincial governments and private sector to provide a coordinated response to emergencies which would have a scope beyond existing structures. Within FAERS, the CFIA has responsibility for the preparation of a foreign animal disease eradication contingency plan. Under that plan, each CFIA area office is required to maintain a foreign animal disease emergency support agreement with each of the provinces in the area (a FADES agreement). A FADES agreement between Ontario and the CFIA is still under negotiation.

7.5.3 Mass Carcass Disposal

Fortunately, we have not had to respond to a test of the emergency preparedness of the food safety system in Ontario on the same scale as experienced in other jurisdictions. However, this also means that Ontario's level of preparedness has not been tested.

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[71] *Emergency Management Act*, R.S.O. 1990, c. E.9.

[72] If there is a "national emergency," the federal government can temporarily exercise exceptional powers in consultation with provincial governments and with the consent of parliament under the *Emergencies Act* The four types of "national emergencies" include public welfare emergencies, public order emergencies (terrorism), international emergencies or war emergencies. A number of agencies of the federal government may assist the CFIA to respond to emergencies pursuant to the *Emergency Preparedness Act*, R.S.C. 1985, c. 6 (4th Supp.). Also see the *Emergencies* Act, R.S.C. 1985, c. 22 (4th Supp.).

[73] CFIA, *Food and Agriculture Emergency Response System (FAERS) Manual* (19 January 1999).

Disease outbreak simulations can be helpful to identify potential shortcomings in emergency plans. For instance, from simulations conducted in the last six years,[74] the CFIA determined that the disposal of large numbers of animals could not be accomplished as fast as required and carcass disposal plans needed to be developed with all provinces.[75]

The government of Alberta has entered into an agreement with the CFIA and developed a plan for mass disposition of livestock carcasses which defines the roles and responsibilities of the various levels of government and livestock producers.[76]

There are no emergency disposal plans identifying pre-arranged disposal methods in Ontario and there are no agreements with the deadstock industry or landfill operations to ensure that there will be options and assistance if mass carcass disposal is necessary. The deadstock advisor has already had to arrange or coordinate, *ad hoc*, the disposal of substantial numbers of deadstock on several occasions including thousands of pigs that were found in southwestern Ontario and a building full of deadstock left by a deadstock receiving plant operator who had walked away from the business.

I recommend that the provincial government enter into a foreign animal disease plan agreement with the Canadian Food Inspection Agency and develop its own comprehensive mass carcass disposal contingency plan in consultation with industry.

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[74] In November 1998, the CFIA conducted a foreign animal disease outbreak simulation in which the postulated disease entered a feedlot operation of 35,000 head of cattle and in November 2000; the CFIA participated in a food and mouth disease outbreak simulation involving the U.S. and Mexico.

[75] N. Willis, CFIA, *International Workshop on Animal Disposal Alternatives (IWADA) – Discoveries and Outcomes*, National Institute for Animal Agriculture (NIAA) Annual Meeting 2002 and T. Steele, CFIA, *Report on the Western Canadian Area Response*, Triparte Exercise, 2000, presentation to National Institute for Animal Agriculture Annual Meeting 2001.

[76] Livestock producers are responsible for disposal including to pre-select an environmentally suitable disposal site or sites large enough to accommodate the entire herd or flock. Land chosen for disposal must meet the regulatory requirements designed to protect human health, livestock health and the environment. The Alberta government suggests that agreements may be made with neighbours who have suitable land if the producer does not have suitable land. *Destruction and Disposal of Dead Animals Regulation*, Alta. Reg. 229/2000.

7.6 Meat Production Disposal Systems in Other Jurisdictions

7.6.1 Other Provinces

Disposal systems and permissible methods vary across the country. The level of disposal regulation in Saskatchewan and Manitoba is similar to Ontario. There are no regulations specific to deadstock or other meat production waste disposal in British Columbia, New Brunswick or Newfoundland and Labrador. In Saskatchewan, deadstock can be refrigerated pending disposal by rendering, burial, incineration or composting.[77] In Manitoba, deadstock must be disposed of, refrigerated or frozen within 48 hours and disposal options include rendering, burial, composting or incineration.[78]

There is greater integration and regulation in Alberta and Quebec. In Alberta, there are specific requirements set out in the legislation for each of the permissible disposal options. For example, the requirements for burial in Alberta include restrictions on volume, depth and location of the burial from homes, highways and waterways.[79] In Québec, the main collection company is related to the main rendering company. The Québec government encourages the use of centralized disposal systems and strictly controls on-farm methods. If a customer of the deadstock collection service stops using the service, the government initiates an investigation to determine what alternative methods are being used.

Three provinces provide some funding for deadstock collection – Manitoba, Prince Edward Island (PEI) and Nova Scotia. In April 2004, the Manitoba government announced that it had agreed to pay a rendering company up to $400,000 to pick-up dead cattle, horses or bison carcasses as part of a "spring cleanup."[80] In PEI and Nova Scotia, producer organizations and the provincial governments fund the collection of deadstock. In PEI, the carcass removal service is free to all beef and dairy producers and takes all carcasses to a rendering plant.

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[77] Under the intensive livestock provisions of the *Agricultural Operations Act*, S.S. 1995, c. A-12.1, certain classes of intensive livestock operations require an approved waste management plan including plans for the disposal of deadstock.

[78] *Livestock Manure and Mortalities Management Regulation*, Reg. 42/98 under the *Environment Act*, C.C.S.M., c. E125, s.15.

[79] *Destruction and Disposal of Deadstock* Regulation, Reg. 229/2000 under the *Livestock Diseases Act*, R.S.A. 2000, c. L-15.

[80] A number of carcasses remained above ground after the spring thaw and with the sudden warm weather they needed to be removed as fast as possible. Keystone Agricultural Producers, News Release, *Livestock Removal Program Good News* (8 April 2004).

7.6.2 Other Countries

Internationally, there is a broad range of disposal methods and systems. Jurisdictions which have experienced substantial animal disease outbreaks tend to have stricter systems and controls on disposal methods.

In the U.S., the situation is similar to Canada. The methods of disposal available to producers, meat processors and others in the food continuum vary depending on the area, but include composting, burial, incineration, new technologies and rendering.

In the European Union (E.U.), strict rules were put in place as of May 1, 2003 regulating the disposal of waste with different options for different categories of waste.[61] Waste in the E.U. is categorized depending on the risk associated with the type of waste; primarily the risk of the spread of BSE related diseases. The types of disposal options permissible in Ontario are only permitted for the lowest risk category under the E.U. system. Burial is not permitted except in remote areas, in emergencies and for pet animals. The E.U. deals with approximately 16.1 million tonnes of animal waste each year.[62]

Prior to the new rules in Europe, most waste was disposed of by way of rendering and co-incineration. Other methods used were composting, incineration, rendering for feeds or pet food, landfill, burial or new technologies. The amount of government involvement in deadstock collection varies considerably in Europe, however, a large majority of governments provided some funding to deadstock collection.[63] In France, the cost to dispose of deadstock is borne by the consumers of meat through a tax levied on retail meat sales.

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[61] The highest risk category of waste are those wastes which contain prohibited substances, SRM, blood, pet animals, experimental animals, zoo animals, circus animals and animals suspected or confirmed as having a TSE disease. The disposal options for the highest risk category are limited to incineration, rendering followed by incineration, or high temperature rendering and then, landfill. The medium risk level options expand to include bio-gas or composting plants, fertilizers and limited use of tallow derivates. For the lowest risk category, the waste can be used in pet food, feed (after rendering) and specified technical products. European Communities, *Regulation (EC) No 1774/2002 of the European Parliament and of the Council of 3 October 2002 laying down health rules concerning animal by-products not intended for human consumption*, [2002] O.J.L. 273/1; *The Animal By-Products Regulations 2003*, S.I. 2003/1482; and U.K., Department for Environment, Food and Rural Affairs, *Application of the EU Animal By-Products Regulations – Annex III*, available from http://www.defra.gov.uk/corporate/consult/euanimabyprod/annex3.htm [accessed 21 March 2004].

[62] *The Animal By-Products (Scotland) Regulations 2003*, Training Seminar materials, *supra* note 3.

The governments of both Ireland and England have incurred substantial costs to slaughter or euthanize millions of animals as a result of outbreaks of BSE and foot and mouth disease. Due to a lack of capacity for disposal of waste which may have prions from BSE-infected cattle, the U.K. paid to have that material rendered into MBM and stored until safe disposal methods could be developed and sufficient capacity built. The amount of MBM has been as high as 250,000 tonnes with storage costs as much as £21 million for 12 months. To reduce harm to health from improper disposal methods, the U.K. government is planning to start a coordinated deadstock removal service in the fall of 2004 that will be funded by the government and annual fees paid by the users. The collection service will be required to adhere to strict biosecurity protocols and pick up any deadstock within 48 hours of notification.

7.7 The Future of Meat Production Waste Disposal in Ontario

7.7.1 Jurisdiction over Regulation and Enforcement

There is a protocol for OMAF and the MOE outlining how they will respond to issues of improper disposal of deadstock. However, the protocol is over 15 years old and is based on a 1976 code of practice. The protocol sets out which Ministry takes the lead, depending on whether the owner can be identified and the deadstock provisions under the *DADA* enforced (OMAF lead) or whether reaction time is critical to prevent contamination or other hazards (MOE lead).

There is no written agreement which sets out the procedure to be followed when other meat production waste disposal issues arise which are arguably within the jurisdiction of both ministries, such as wastewater from abattoirs and the disposal of abattoir waste. If both Ministries become involved with different responses or neither Ministry agrees to respond to an issue, it could cause serious difficulties. An agreement should be developed and entered into by the Ministries to update the existing protocol and address those situations where their jurisdictions overlap.

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[63] 5 countries were reported to fund the entire cost of deadstock collection. 5 countries were reported to support deadstock collection by 50-100%. 2 countries had varying levels of support depending on the area and 2 countries did not provide any government support.

I recommend that the Ministry of Agriculture and Food and the Ministry of Environment enter into an agreement regarding their respective roles and responsibilities in the disposal of meat production waste and the manner in which they will respond to situations involving overlapping authority.

The current plan of the provincial government is to divide the jurisdiction over the disposal of deadstock and waste from meat production. This will be accomplished by regulating "on-farm" disposal under the *NMA*[84] and "abattoir" wastes under the *FSQA*.[85] Both regulations are to be introduced at the same time. The MOE and OMAF will share jurisdiction under the *NMA* regulation and OMAF will administer the *FSQA* regulation alone.

The proposed regulations under the *NMA* and *FSQA* have not yet been promulgated. The plan announced in 2002 provided for three sets of regulations being implemented after at least three stages of consultations with the third to address deadstock disposal. Only the first stage of the process appears to be complete with the proposed deadstock and meat waste disposal regulations still many months, if not over a year, away.[86]

In 2002, the plan was to have the MOE provide enforcement and OMAF provide education and compliance for the *NMA* on-farm disposal regulation. However, the plan was changed in November 2003 so that the MOE would handle both the compliance and enforcement activities. The realignment of responsibility was reportedly done to respond to a recommendation in the Report of the Walkerton Inquiry that the MOE take the lead role in regulating the impact of farm activities on sources of drinking water.[87] The current plan for the jurisdiction over on-farm disposal is as follows:

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[84] *Nutrient Management Act, 2002*, S.O. 2002, c. 4. The *NMA* has a broad definition of farm animal which includes livestock, cultured fish, deer, elk, game animals and birds. The *NMA* specifically authorizes regulations to be made to govern the disposal, storage and transportation of dead farm animals. *NMA*, s.7.

[85] The regulation would replace the *DADA* and its regulation.

[86] MOE, News Release, *Consultations on draft Regulations Under Nutrient Management Act* (20 August 2002). Media Backgrounder, MOE, August 20, 2002, *Consultations On Draft Regulations Under Nutrient Management Act*. The first regulation under the *NMA* is O.Reg. 267/03.

OMAF lead	**Joint**	**MOE lead**
Support to Farmers/Producers	Policy and Standards	Enforcement
NMA plan reviews and approvals	Regulation	*EPA* approvals
Training, certification and licensing	Research	Monitoring / Compliance

I have concerns about the division of jurisdiction over deadstock and other meat production waste disposal between the two ministries. As much as I understand the reasons for the MOE policing all sources of potential water pollution, including manure production, its assumption of jurisdiction over compliance and enforcement of on-farm deadstock disposal is, in my opinion, not appropriate. Although water safety issues can arise if deadstock disposal is poorly managed, the issues associated with deadstock are much more closely related to food safety.

In my view, OMAF is better situated to take the lead on this issue given its responsibility for addressing all aspects of deadstock and meat waste disposal off-farm. I do not see that this would in any way dilute the mandate of the MOE as the guardian of our water supply. It would, however, represent a more efficient deployment of government resources since OMAF has the experience, expertise and infrastructure to address all the safety issues that arise with respect to deadstock. The MOE would not be excluded from the process since its jurisdiction already permits it to intervene when there is the likelihood of any harm to the environment. Systems should also be in place to keep the MOE informed with respect to any on-farm threats to the water supply but day-to-day monitoring and enforcement of deadstock disposal issues fall more logically within the purview of OMAF. The ultimate goal should be the integration of food inspection services from the farm forward, not further fragmentation.

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[87] MOE, News Release, *Status of Government's Actions on O'Connor Recommendations* (20 December 2002), OMAF, News Release, *McGuinty Government Implements Walkerton Recommendation* (26 November 2003).

I recommend that the disposal of meat production waste, including deadstock, from the farm to processing, continue to be administered by the Ministry of Agriculture and Food. I recommend that the regulatory standards and permissible methods for the disposal of meat production waste be consistent irrespective of the source or location.

7.7.2 Future Disposal Methods

In order to protect the health of Ontarians, our economy and our natural environment, we need a regulated animal waste disposal system which is sensible, and properly enforced.

Many of the current challenges in deadstock disposal have resulted from the discovery of BSE in cattle and the market adjustments that have followed. The current system cannot handle the glut of deadstock and waste from production. There is no simple answer to the deadstock and disposal problem. It is a complicated issue involving market forces, farm management practice, health and environmental concerns, and the application of both traditional practices and emerging technologies. It requires our attention. Although new strategies must be explored in searching for a long-term solution, there is a crisis at hand in this sector of the meat industry which must be addressed.

7.7.2.1 Disposal Methods On-Farm and at Abattoir

OMAF is currently studying composting and incineration. Those studies should be completed and more undertaken to determine the impact and viability of other current or proposed methods such as burial and landfills. In addition to testing the effectiveness of these systems in degrading the waste, OMAF should study the actual application of the methods to determine if there are any problems with their implementation. For example, if the testing of incineration units for producers continues to be positive, their actual use by producers should be studied to ensure those units will perform as expected in the field.

If disposal in landfills is permitted, it should only occur where controls, including biosecurity protocols, are implemented to protect against the transmission of disease. Except in cases of emergencies, the waste disposed of in landfills or by burial and composting should be low risk waste or waste that has already been treated to destroy any pathogens.

Dumping is currently illegal, but I was advised that there has been some discussion about permitting this method of disposal in the future. Those in favour argue that in warmer weather the carcasses degrade rapidly or are taken by scavengers. This, of course, is what happens with most dead wildlife. In the north during the winter, it provides an option when burial and composting are not possible. However, dumping provides no safeguards against risks to human health or the environment and is unlikely to foster public confidence in the management of meat production. It should not be permitted.

7.7.2.2 Centralized Disposal Methods

It will always be challenging to regulate disposal methods such as burial or composting on-farm due to the number of livestock farms. It is easier to regulate and gather data from centralized disposal sites. The only centralized disposal method presently available in Ontario is rendering. The benefits of centralized disposal methods include access to carcasses for surveillance purposes and convenience in regulating and monitoring the disposal. With collectors spread across Ontario, there is equipment available for transporting, storing and disposing of large quantities of meat waste.

The provincial government should encourage and support a system of centralized disposal methods, with particular attention to those methods, such as rendering, which recycle waste as opposed to discarding it.

To use centralized disposal methods, there needs to be collection of deadstock and meat production waste. The existing centralized deadstock collection systems can only survive if they are funded. However, the rendering industry will only fund the collection system if it has markets and user fees at the time of pick-up are not effective. User funding such as the annual fees charged in the U.K. is an alternative, as is the collection of a levy for each live animal sold similar to the check-off system used to fund inspection services at sales barns. The government could also fund or subsidize the cost through existing tax revenue or, as in France, introduce a tax on meat products.

In more remote areas of Ontario, the provincial government should permit the storage of deadstock and waste in a frozen state until it can be collected. This would permit receiving plants to operate "transfer stations" with deadstock held in a frozen state until sufficient quantities had been collected for transport to rendering or other centralized disposal facilities in southern Ontario.

I recommend that the provincial government amend the *Dead Animal Disposal Act* and *Meat Inspection Act* regulations to require deadstock and other meat production waste to be disposed of within 48 hours unless frozen and stored in accordance with standards to be set out in the regulations.

The future disposal system should include options and protocols for the safe disposal of meat production waste which may contain dangerous chemical or biological contaminants. The current system in Ontario does not have such capacity.

There are several disposal methods which are not in use in Ontario, but are used elsewhere in the world, which can safely dispose of such materials including centralized incineration or co-incineration, alkaline hydrolysis, high-pressure hydrolysis biogas processing and the Brookes gasification process. Most, if not all, of these methods have been evaluated in recent years by scientific panels for the European Commission in ongoing efforts to determine safe methods for the disposal of wastes which contain prions.

I recommend that the provincial government, in collaboration with the industry, undertake in-depth study and coordinate their planning and resourcing for long-term environmentally sound disposal capacity involving alternative recycling options. The provincial government should provide the appropriate Director of OMAF with the legislative or regulatory authority to approve a method of disposal at a specific location for the purposes of study and research.

7.7.3 Future Inspection and Compliance

The provincial government should continue to license and inspect those involved in deadstock and other meat production waste collection, receiving and rendering or other centralized disposal processes. The deadstock advisor and the inspectors who deal with the industry on a regular basis represent a valuable, experienced resource. However, their numbers are small and their capacity for responding to complaints limited. Current policy has them offering advice to first time offenders rather than laying charges under the *DADA*. Proceedings are taken against repeat offenders, however, the existing computer information system at OMAF does not record deadstock disposal complaints. As a result, the deadstock advisor is left to rely on his memory in determining which course of action should be pursued.

Occasionally, people refuse to properly dispose of deadstock and OMAF has to make arrangements for the disposal. In some cases, the government absorbs the cost. The governing legislation should be amended to include provisions for the government to recover costs incurred. Several statutes give the government authority to commence litigation to recover costs or a judicial officer authority to order payment of costs in addition to fines, however, the most efficient method of cost recovery appears to be in the *HPPA* which allows the government to add the costs it incurs to the offender's property taxes.[88]

I recommend that the Ministry of Agriculture and Food enhance its Food Safety Decision Support System to permit information on deadstock disposal complaints and responses to be recorded, searched and analyzed.

The Ministry of Natural Resources enforcement personnel have not been able to respond to serious deadstock disposal complaints in a timely manner. It is crucial that such complaints be responded to as soon as possible, preferably within 48 hours, as the waste must be disposed of quickly and properly to avoid risks to human health, the environment or public confidence.

I recommend that the deadstock inspectors be given additional regulatory authority to issue orders requiring compliance with

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[88] *HPPA, supra* note 20, s.15(2).

regulations. The orders should stay in place pending compliance or until overturned on appeal.

7.7.4 Conclusion

The disposal of meat production waste is an important stage of the meat production continuum and properly part of the inspection and regulatory regime for the food safety system in Ontario.

I recommend that the regulations governing the disposal of deadstock be extended to include all species.[89]

I recommend that the provincial government ensure that the disposal of meat production waste is appropriately regulated at all stages in the continuum. The *Food Premises* regulation should require the safe disposal of meat production waste and limit the methods of disposal to those permitted for abattoirs and processors where the risks are similar due to the nature and volume of the waste. The provincial government should promulgate a regulation under the *Food Safety and Quality Act, 2001* prescribing the safe disposal of meat production waste at all stages from production through processing.

The provincial government should ensure that the future system for the disposal of meat production waste in Ontario is strictly regulated with protocols to protect human health and the environment. The system should have sufficient capacity to handle deadstock and other meat production waste efficiently and safely, even in mass disposal situations.

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[89] In this recommendation, all species refer to the species currently included and poultry, ratites, wild ruminants, mink, domestic pets, raccoons, possums, domestic deer, elk, bison, lamas, sheep, goats, mink, and zoo animals.

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Chapter 8 - Meat and Fish Processors

8.1 Introduction – Meat Processors

Meat has been processed for centuries. Originally, processing was simply used to extend the period during which a product could be safely consumed. Salting and smoking[1] are traditional meat processing methods still used today. In addition, meat may be ground, cured,[2] fermented[3] or mixed with other ingredients.[4] The finished product may be ready-to-eat (RTE) or require further preparation before consumption and includes ground meat, hot dogs, sausages, ham, bacon and cold cuts.

Demographic changes have produced an increasing demand for processed meat products which are regarded by many consumers as convenient and affordable. The rapidly expanding population consumes fewer home-cooked meals and more pre-cooked food products and fast food. Currently, meat processing is the largest sector of the Canadian food industry with sales exceeding $14 billion.[5]

Consumer confidence in the safety of processed meat is vital to the viability of the industry. As with every other stage in the farm to fork continuum, hazards exist. Delivery of a safe processed product requires their control and, where possible, elimination.

8.2 Food Safety Risks – Meat Processors

The risk of contamination is ever present notwithstanding the success of previous participants in the farm to fork continuum in controlling them. Pathogens may remain[6] and biological, chemical or physical contaminants[7] may all be introduced at the processing stage due to substandard premises, equipment or processing practices.

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[1] "Smoking" describes a process whereby meat is cured and treated with smoke to dry the meat and add flavour.

[2] "Cured" describes a process of adding salt, brine, with or without sugar, spices, nitrites and other ingredients to a meat product.

[3] "Fermented" products have undergone a process by which microbes produce alcohol or acid which act as preserving agents. Salami is a typical example of a fermented product.

[4] "Other ingredients" include meat from the same or a different species of animal or food additives.

[5] According to the Canadian Meat Council, available from http://www.cmc-cvc.com/English/industry_statistic_e.asp [accessed 16 June 2004].

[6] See for example, the European Food Information Council, *Food Processing, Lasting longer/Staying safer*, available from http://www.eufic.org/gb/safe/safe01c.html [accessed 10 June 2004]

[7] This topic is discussed, at length, in Chapter 3.

In its 2003 Annual Report, the Canadian Food Inspection Agency (CFIA) noted:

> *The leading causes of recalls for microbiological contamination were Salmonella, Listeria and E. coli 0157:H7. Listeria was found in various ready-to-eat meat and dairy products such as frankfurters and cheese. Salmonella was found in assorted foods, such as sausage and spices, and E. coli 0157:H7 was primarily found in burgers, ground beef and some cheese products.*[8]

Since 1998, the CFIA has announced approximately 65 meat recalls due to possible contamination and the attendant risk of the transmission of foodborne illness to consumers.

A health hazard alert issued by the CFIA on May 16, 2003 highlights the public health concern:

> *E. coli 0157:H7 causes serious and potentially life-threatening-illness by producing a toxin that breaks down the lining of the intestines and damages the kidneys. Food contaminated with E. coli bacteria will not look or smell spoiled. This product should not be consumed.*[9]

8.3 Current System – Meat Processors

8.3.1 Legislation

Meat processors who participate in interprovincial or export trade must be federally registered.[10] Their businesses are regulated by the *Meat Inspection Act* (Canada) and are overseen by the CFIA. The activities of all others are governed by provincial legislation.

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[8] CFIA, *Performance Report for the period ending March 31, 2003*, available from http://www.tbs-sct.tc.ca/rma/deep/02/03/CFIA-acia/CFIA/03/D01_e.asp [accessed 16 March 2004].

[9] The CFIA, Health Hazard Alert, *George's Tastee frozen unbaked patties (with beef filling) may contain E. coli 0157:H7 bacteria*, available from http://www.inspection.gc.ca/english/corpaffr/recarapp/2003/20030516e.shtml [accessed 18 June 2004].

[10] *Meat Inspection Act*, R.S.C. 1985, c. 25 (1st Supp.).

Under the *Health Protection and Promotion Act* (*HPPA*),[11] the Ministry of Health and Long-Term Care (MOHLTC) and Boards of Health have legislative responsibility over all premises where meat is processed and sold. In 1994, the MOHLTC entered into a memorandum of understanding with the Ministry of Agriculture and Food (OMAF) to address an apparent overlap in their jurisdictions relating to meat inspection. Since that time, Boards of Health conduct routine inspections of meat processors only if their business is conducted separately from a provincially licensed abattoir. Those facilities, commonly known as free standing meat processors (FSMPs), are required to adhere to the *HPPA* and the *Food Premises* regulation promulgated thereunder.[12] However, meat processing operations conducted within a provincially licensed abattoir are overseen by OMAF as part of the inspection program it administers pursuant to the *Meat Inspection Act* (Ontario) (*MIA*)[13] and its regulations.[14]

If the *Food Safety and Quality Act, 2001* (*FSQA*)[15] is proclaimed, OMAF will also have legislative authority to regulate the activities of FSMPs.

8.3.2 Licensing and Standards

Neither the *HPPA* nor the *Food Premises* regulation require FSMPs to be licensed. Operators are required to give notice to the local Board of Health of their intention to operate. They are also obligated to provide information concerning their business and comply with the standards for premises, equipment, processing practices and meat products which the *HPPA* and the *Food Premises* regulation establish.

Under the *MIA*, the operator of an abattoir must not commence or continue operation unless a licence has been obtained.[16] A licensed abattoir is permitted to undertake processing activities in accordance with the regulations enacted under the *MIA*. If the licence of an abattoir is not renewed or revoked, the processing operation may continue but would then be regulated under the *HPPA*.[17]

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[11] *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7

[12] *Food Premises*, R.R.O. 1990 Reg. 562 (the *Food Premises* regulation).

[13] *Meat Inspection Act*, R.S.O. 1990, c. M.5.

[14] O. Reg. 632/92.

[15] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20, s. 2 defines "regulatable activity" as including processing food for consumption.

[16] *MIA*, *supra* note 13, s. 3.

Under the *FSQA*, there is authority to require the licensing of any facility that processes meat.

While FSMPs and meat processors connected to abattoirs are governed by different legislative regimes, all provincially regulated meat processors are subject to requirements which:

- are designed to ensure that the premises at which meat is processed are properly constructed, maintained and cleaned;[18]
- establish minimum standards for lighting and ventilation;[19]
- require the premises to have an adequate supply of potable water and washrooms;[20]
- require adequate, appropriately maintained and sanitized equipment and utensils on-site;[21]
- restricts[22] or prohibits[23] the presence of uninspected meat on site;
- requires that all product be fit for human consumption although current provincial legislation does not describe methods of processing or standards in any detail.[24]

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[17] Since currently, free standing meat processors need not be licensed, processing (but not slaughtering) operations formerly conducted at an abattoir may continue at the same premises if the abattoir's licence is not renewed, suspended or revoked. I understand in that event OMAF advises the local Board of Health by letter, that the processing operation is no longer connected to a licensed abattoir and leaves to the local Board of Health the task of inspecting the processing operation from that date onward.

[18] O. Reg. 632/92, ss. 5-16 and the *Food Premises* regulation, ss. 11 and 59.

[19] O. Reg. 632/92, s. 6(2) and the *Food Premises* regulation, ss. 13 and 15.

[20] O. Reg. 632/92, ss. 9-11 and the *Food Premises* regulation, s. 68.

[21] O. Reg. 632/92, ss. 13-19 and the *Food Premises* regulation, ss. 56-63 and 71-82.

[22] O. Reg. 632/92, ss. 27,28, although wild game is, as outlined in Chapter 6, permitted according to strict guidelines and the *Food Premises* regulation, s. 40 which permits uninspected meat at a food premises for the purposes of custom-cutting, wrapping and freezing for its owner.

[23] O. Reg. 632/92, ss.27, 28; O. Reg. 74/04, ss. 3 and 6 which will, effective September 1, 2004, prohibit uninspected meat at a food premises unless obtained through hunting and for the purposes of custom-cutting, wrapping and freezing for the owner.

[24] O. Reg. 632/92, ss. 26,29 and 39; *HPPA*, *supra* note 11, s. 17 and the *Food Premises* regulation, s. 37.

The *MIA* and its regulations address these same requirements but are more detailed in certain respects than the *Food Premises* regulation of the *HPPA*. For example, they require that an applicant for a licence submit plans and specifications of the plant recommended by a regional veterinarian,[25] and contain additional construction requirements.[26] Unlike the *Food Premises* regulation, the regulations under the *MIA* address product flow by requiring that incompatible activities be separated and that products move from raw to finished.[27] Operators overseen by OMAF must provide recipes to OMAF[28] and comply with more detailed production standards.[29] The regulations under the *MIA* contain labelling and stamping requirements not found in the *HPPA* or in the *Food Premises* regulation.[30] On the other hand, the requirements contained in the *Food Premises* regulation are more extensive with respect to utensils and food processing equipment and prior approval for some changes is required.[31]

The food safety hazards are the same at an FSMP or a meat processing operation conducted at an abattoir. All of the contaminants that commonly cause foodborne illnesses can be found at both. There seems to be no justification for maintaining different standards.

When the current legislative scheme is compared to the National Meat and Poultry Regulations and Code (NMPRC) it is clear the existing provisions are out of date. Even a cursory review reveals the limitations and gaps in current regulations. The NMPRC covers, in careful detail, plant design, facilities, equipment, maintenance, sanitation, pest control, water, personnel including their health and training, processing and meat product standards including recipes, safe processes, storage, temperature control, packaging, drug residues, limits on microorganisms, sampling and testing, labelling, storage, transportation, distribution records and recall procedures. Those provisions recognize that a good food safety program must address every aspect of a processor's business including construction and day-to-day activities.

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[25] O. Reg. 632/92, s. 4 (1) (a).
[26] *Ibid.*, ss. 5-16.
[27] *Ibid.*, s. 6 (3).
[28] *Ibid.*, s. 40.
[29] *Ibid.*, s. 37 which incorporates by reference the Code of Practice of Health Canada.
[30] *Ibid.*, s. 75-84.
[31] *Food Premises* regulation, ss.41, 68-69 and 71-82.

Adoption of regulations equivalent to the NMPRC, as I have earlier recommended, would modernize and improve existing standards. Those regulations should apply to all provincially regulated processors[32] regardless of location. This is important for food safety but i is also necessary if provincial meat processors hope to gain access to markets that require compliance with federal standards.

8.3.3 Inspection

Inspection services are provided to ensure that meat is stored, prepared, served and distributed in a manner consistent with required practices and to limit the possibility of food being sold or distributed which is unfit for human consumption. Though processing activities are subject to provincial government oversight through inspection, the approach adopted by Boards of Health and OMAF is substantially different.

Under the *HPPA*, Boards of Health have a statutory duty to inspect food premises.[33] The Mandatory Health Programs and Services Guidelines (Mandatory Guidelines) established by the MOHLTC[34] require Boards of Health to assess food premises annually to determine their risk status according to a Hazard Analysis Critical Control Points (HACCP) protocol. Based on the results of the review of epidemiological evidence, the properties of the foods served, the nature and size of the operation and the nature of its customer base, premises are assessed as high, medium or low risk. High risk premises are to be routinely inspected quarterly, medium risk semi-annually and low risk annually. In 2003, few Boards of Health completed the required number of routine annual inspections.[35]

OMAF's inspections of processors connected to abattoirs are scheduled on a different basis. Unlike slaughtering activities for which a meat inspector is required to be present at all times, inspection of processing activities is undertaken periodically. OMAF assesses each facility's processing activities and history of compliance, consumer complaints and food safety performance. Weekly further processing inspection hours are allocated according to that assessment. High risk facilities are to receive 3.5 hours, medium risk 2.5 hrs and low risk 1.5 hours of routine further processing inspection weekly although OMAF has advised the Review that fewer inspection hours may actually be provided in the event of limited human resources or other operational requirements. Nevertheless, processors connected to abattoirs receive more frequent regular inspection than FSMPs.

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[32] The recommendation is made in Chapter 2.

[33] *HPPA, supra* note 11, s. 10(2).

[34] MOHLTC, *Mandatory Health Programs and Services Guidelines* (December 1997).

[35] Information provided to the Review revealed that 10 out of 37 health units completed 80% or more of the 3 routine inspections required for high risk food premises and 8 out of 37 completed 80% or more of the inspections required for medium and low risk food premises.

While some stakeholders have suggested that I should assess the relative competence of OMAF meat inspectors and public health inspectors, I do not believe that exercise is necessary. Nothing has come to my attention to suggest that inspectors from one provincial government program are necessarily more qualified to undertake the inspection of meat processing facilities than inspectors from the other. Provided the concerns I have mentioned earlier are addressed, I am satisfied that OMAF meat inspectors are positioned to adequately and competently monitor the activities of FSMPs, if OMAF is given that responsibility.

Since all abattoirs undertake some processing activity, OMAF currently offers three levels of further processing training for meat inspectors. Abattoir operators remove bone from meat and break carcasses into primal or sub-primal cuts. Many also manufacture fresh processed meat through grinding or fabricating. Consequently, all OMAF meat inspectors receive a basic level of further processing training covering these processing activities.

Some processors undertake additional activities which OMAF regards as medium risk. They include curing, smoking and vacuum packaging of meat products. OMAF requires that such processing operations be inspected by those which have received a second level of further processing training. Inspectors who have completed the third level of this training inspect premises undertaking dry curing, fermenting or canning of meat which are categorized by OMAF as high risk activities.

OMAF's Veterinarian Trainer and Further Processing Coordinator has responsibility to modernize and enhance food processing training for meat inspectors, to develop additional resources for initial and continuing education and to improve OMAF's ability to capture information relating to further processing activities in its Food Safety Decision Support System (FSDSS).[36] Those initiatives are important and should continue.

While differently worded, both the *HPPA* and *MIA* confer broad powers upon inspectors. They include rights of entry to inspect meat and meat products, rights of detention and authority to obtain samples.[37] Subject to review by others,[38] inspectors are authorized, in certain circumstances, to issue orders that non-compliant operations cease.[39] If proclaimed, the *FSQA* would expand those powers.[40]

Concern that FSMPs are not currently receiving sufficient inspection was expressed by a number of people including representatives of the provincial government and the Ontario Independent Meat Processors (OIMP).[41] OIMP acknowledges that the alternative systems of regulation and inspection of meat processors fuels a perception that Ontario's approach and standards are deficient. Many submissions to this Review suggested that a consolidated provincial approach to regulating meat processors in Ontario was long overdue. I agree.

There are a wide range of causes of contamination and the pace of discovery of new hazards is accelerating. Processes utilized to prepare meat and meat products for human consumption are complex and potentially dangerous. A common system of inspection undertaken by a properly trained inspectorate will provide more consistent, reliable monitoring and foster greater consumer and business confidence.

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[36] Derived from information provided by OMAF in response to questions asked by the Review.

[37] *MIA*, *supra* note 13, s. 11(3), (4); O. Reg. 632/92, ss. 85-87 and 90-91; *HPPA*, *supra* note 11, ss. 13, 19 and 41.

[38] O. Reg. 632/92, ss.85(5), 86(4), 87(9) and 94(2) and *HPPA*, *supra* note 11, ss. 44-45.

[39] O. Reg. 632/92, s. 86 (1) and 94 (1) and *HPPA*, *supra* note 11, s.13(4)(b) and (c).

[40] *FSQA*, *supra* note 15, ss. 16-32.

[41] The Ontario Independent Meat Processors made a submission to the Review at the public meeting held in London, Ontario, March 31, 2004. In its submission, the Ontario Federation of Agriculture suggested that the difference in treatment between FSMPs and processors connected to abattoirs is an "anomaly" and "is suspected of leading to compromised inspection and safety, while conferring differing economic advantages across similar businesses."

No reason has been advanced which justifies FSMPs being treated differently from processors connected to abattoirs. All meat processors should be subject to the same rules.

I recommend that the *Food Safety and Quality Act, 2001* and regulations to be promulgated thereunder regulate the activities of non-federally registered meat processors whether they are connected to an abattoir or free standing.

The provisions should require that meat processors be licensed,[42] delineate standards consistent with the NMPRC and establish a comprehensive system of inspection.

Should the *FSQA* be proclaimed, OMAF is expected to assume jurisdiction for the regulation and inspection of all FSMPs that conduct high risk processing activities (eg. canning, dry curing, fermenting) or distribute their product off-site and are not federally inspected. The survey it conducted has identified approximately 700 such facilities.

OMAF has advised the Review that it anticipates a need for approximately 55 additional full-time meat inspectors in order to adequately inspect FSMPs. I am of the view that OMAF should conduct routine inspection of meat processors weekly. OMAF should also continue to allocate hours of further processing inspection applying risk criteria and the current number of hours for the various categories should represent the minimum required. OMAF should have, at all times, adequate human and financial resources to ensure that those levels of inspection are consistently met. In Chapter 6, I recommended that an independent audit be undertaken to determine the number of inspectors required in abattoirs to provide proper inspection. FSMPs should be included within that audit in order to determine the number of inspectors actually required, taking these observations into account.

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[42] Under *FSQA*, *supra* note 15, s. 4, no person shall carry on a licensed activity unless the person holds a licence for the activity issued under the *FSQA*. The phrase "licensed activity" is defined in section 2 as being a regulatable activity (which would include meat processing) to which the regulations specify section 4 is to apply. The regulation should specify that section 4 applies to non-federally registered meat processors whether connected to an abattoir or free standing. It should be noted that a number of participants in the Review thought OMAF's estimate of the number of FSMPs low.

8.3.4 Audits

The annual independent audit of abattoirs includes connected meat processing operations.[43] Deficiencies in premises, equipment and business practices are noted and corrective action plans developed to ensure they are addressed in a timely and adequate manner. If the processing operation is the source of a serious deficiency endangering public safety or if the operator fails to fulfill the terms of a corrective action plan, the licence granted by OMAF may be at risk.[44]

Hearing decisions provided by OMAF demonstrate the importance of the audit process.[45] An independent, comprehensive, annual review provides a system of verifying compliance and assists in determining whether monitoring activities are being adequately performed.

A similar audit process is not currently undertaken for FSMPs.[46] If the *FSQA* is proclaimed, an audit program should be initiated as part of the regulatory program for FSMPs.

In my view, a satisfactory annual audit,[47] or the development and execution of a corrective action plan by a meat processor, should be a precondition to a licence renewal.

8.3.5 Surveillance and Testing

OMAF has indicated that it is planning to undertake additional studies with respect to the microbiological quality of RTE meat and environmental chemical residues to assess the levels of risk, facilitate the development of performance standards, measure the impact of regulation, target resources and assess existing plant practices.

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[43] Information concerning audits was provided to the Review by OMAF.

[44] In those events, the operator may be required to attend a hearing over which the Director of the Food Inspection Branch presently presides and after the hearing the Director may refuse to renew the operator's licence or suspend or revoke the licence.

[45] Between 2001 and 2003, for example, several hearings w ere held to review issues uncovered during audits involving deficiencies in premises, defective equipment and substandard business practices.

[46] Although the Mandatory Health Programs and Services Guidelines require inspections of high risk food premises in accordance with the MOHLTC's Hazard Analysis Critical Control Points protocol.

[47] By that I mean one which concludes that the operation complies with all regulatory requirements.

Earlier in this Report, I recommended that those studies be completed. They will enable the provincial government to establish mandatory microbiological performance standards which processors will be required to meet within a reasonable time. Such studies, standards and performance requirements will likewise improve meat safety and consumer and business confidence.

8.3.6 Traceability

The ability to determine the source of raw materials and the destination of meat products is not addressed in a comprehensive way in existing legislation. Processors connected to abattoirs are only required to keep records of animals purchased, an inventory of supplies and materials bearing the inspection legend and to comply with federal labelling requirements.[48]

The *Food Premises* regulation is more expansive. It obligates FSMPs to maintain records of meats received for processing including the names and addresses of suppliers and the dates of receipt and outgoing meat products must identify the processing plant of origin.[49]

The requirements in the NMPRC are more extensive. For example, they require that meat products be labelled in a manner that allows accurate and rapid identification.[50]

I have recommended that a system be developed and implemented throughout the farm to consumer continuum to enable meat and meat products to be traced back to their source and forward to their destination.[51] Such a system will help ensure that meat processors are accountable for the quality and wholesomeness of their meat products, improve the effectiveness of food recalls and facilitate epidemiological study.

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[48] O. Reg. 632/92, s. 92

[49] *HPPA, supra* note 11, s. 16 (5) and the *Food Premises* regulation, ss. 38-39.

[50] *National Meat and Poultry Regulation*, s. 77(d).

[51] See Chapter 3.

8.3.7 HACCP

As I have described previously,[52] OMAF has recently introduced its HACCP Advantage program which is designed to encourage meat processors to develop, implement and adhere to a HACCP-based food safety program. However, unlike the federal program, mandatory compliance is not, at this point, required. Supported by a successful pilot project, OMAF believes that it has demonstrated HACCP to be an accessible, affordable and viable program which enhances food safety. However, it is unclear whether the program, which is aimed at all meat processors whether connected to abattoirs or not, will gain widespread acceptance.

The MOHLTC has not developed a HACCP-based food safety program for food premises and none appears to be presently contemplated.

I have earlier recommended the development and implementation, over time, of mandatory HACCP-based food safety programs for every sector including processing.[53] Public safety, continued access to existing markets and development of additional ones, require it. The recommendation has not been made lightly and I have considered, at length, the financial impact of the recommendation on small and medium-sized establishments (SMEs).

In 2002, a study commissioned by OMAF determined whether the facilities, equipment and certain practices of 14 FSMPs complied with the *MIA*, its regulations and standards of compliance published by OMAF. It found that all had structural deficiencies requiring correction. It also found the operations fell below, to varying degrees, required standards for equipment, facilities and product flow. While injections of capital were required, all deficiencies were capable of being remedied.[54]

The purpose of the recommendation is not to eliminate competent operators from the marketplace. I have, therefore, also recommended that HACCP-based food safety programs be flexible so long as the objective of ensuring the delivery of a wholesome product is achieved.

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[52] *Ibid.*

[53] *Ibid.*

[54] J. Christian and P. Wu, *Free standing Meat Processors Regulatory Economic Impact Analysis* (June 2002). The authors estimated the costs of bringing the plants into compliance to the 2002 standards ranged from a low of approximately $36,000 for one facility to a high of approximately $1.76 million for another.

In an effort to provide a measure of assistance to operators, I have recommended that the provincial government provide various programs and take a number of steps to facilitate transition to a HACCP-based food safety program. I am satisfied that virtually all meat processors in Ontario are already committed to food safety and that they will find the transition to a HACCP-based food safety program can be more easily accomplished than some anticipate.

8.3.8 Food Handler Training

Thousands of workers are employed in Ontario's meat processing industry. They are involved when materials are received, unpackaged, processed, packaged, labelled, stored and shipped. At each stage, the diligent exercise of their duties in a safe and hygienic manner is essential to the delivery of a product that is safe to eat.

Understanding meat safety, biological, chemical and physical risks of contamination and the means of minimizing or eliminating them is imperative for all involved in meat processing. Given the importance of their duties, standardized food safety training should be mandatory for all personnel involved in the handling of meat at a processing operation.

8.3.9 Coordination of Resources

When OMAF attempted to determine the number of FSMPs in Ontario that would fall within the regulatory scheme contemplated under the *FSQA*, it excluded certain operations that conducted "low risk" activities, such as cutting and grinding, and sold their product from the premises where the processing activity was undertaken. These premises, most notably many neighbourhood butcher shops, were classified as meat retailing operations and excluded on the basis that their activities "presented a minimal degree of risk to consumers, as products would be cooked by the consumer prior to consumption."[55] OMAF proposes that meat retailing operations will continue to be governed by the *HPPA* and the *Food Premises* regulation administered by the MOHLTC notwithstanding the proclamation of the *FSQA*.

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[55] A view that is exhibited in and has continued since the preparation of OMAF, *Free standing Meat Processors inventory and Risk Assessment Final Report* (25 March 2002).

I am satisfied that properly resourced, both OMAF and the MOHLTC are capable of administering effective inspection programs that will address the particular risks associated with the different types of FSMPs. But, whatever the configuration, the delivery of inspection must be comprehensive. OMAF and the MOHLTC must ensure, legislatively and operationally, that there are no gaps in the system and that duplication is, wherever possible, eliminated. They must ensure that all meat processing operations are identified, the nature of meat processing activities determined and any changes in the operations identified. Those assessments should be undertaken with regularity so that responsibility for regulation and inspection can be appropriately allocated and performed with sufficient frequency by appropriately trained personnel. The proclamation of the *FSQA* will not eliminate the need for an agreement between the MOHLTC and OMAF of the kind entered into a decade ago. To the contrary, an agreement to address changes in the regulatory system will be required as will regular communication to ensure that risks which may endanger public safety and have far-reaching economic consequences are addressed, whether at processors connected to an abattoir, FSMPs or elsewhere. As stated by the Pennington Group:

> *The potential for cross-contamination of foods points to the critical nature of meat production and butchers' premises in the food chain. Even with measures taken earlier in the chain to help prevent contamination, it is probably inevitable that some meat will enter the premises contaminated with E. coli 0157:H7. All raw meat, needs to be treated as though it is potentially contaminated and appropriate handling and hygiene standards adopted.*[56]

The prevalence of hazards, whether the meat processing activity is "low risk" or not, must be borne in mind at all times and the standards to which meat processors are held should be equivalent wherever the activity is conducted.

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[56] The Pennington Group, *Final Report on the Circumstances Leading to the 1996 Outbreak of Infection with E. coli 0157:H7 in central Scotland, the Implications for Food Safety and the Lessons to be Learned* (Scottish Office, 1998) available from http://www.scotland.gov.uk/_libraries/documents-w4/pgr-00.htm [accessed 4 June 2004].

I recommend that the Ministry of Agriculture and Food and the Ministry of Health and Long-Term Care enter into an agreement to ensure that the activities of all meat processors are appropriately regulated and inspected without unnecessary duplication.

8.4 Introduction – Fish Processors

I debated throughout the Review whether to comment on the production and processing of fish for human consumption as my mandate was limited to "meat". However, since the *FSQA*, once proclaimed, will provide for the quality and safety of all agricultural and aquatic commodities, it seems appropriate to consider the regulatory regime for the processing of fish as part of this Review.

There is no mandatory broad-based inspection of the processing of fish for food safety purposes in Ontario. The federal government has jurisdiction over fish that is transported as food between provinces or out of the country. Fish processing plants that ship fish and fish products out of province or out of country are required to be licensed and inspected by the CFIA. The provincial government has jurisdiction over fish processors which process fish for human consumption solely within Ontario. There is legislation in Ontario which permits inspection of fish and fish processing, however, it is not mandatory and there is no inspection program to address all of the food safety risks associated with the processing of fish for human consumption.[57]

The production of fish meat for human consumption is done in stages similar to those in the production of animal meat for human consumption including raising fish, acquiring fish for "slaughter," "slaughtering" fish, harvesting fish meat from fish carcasses, processing fish meat into products for human consumption, transporting fish and fish products, and selling or serving fish and fish products to consumers.

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[57] *Fish Inspection Act*, R.S.O. 1990, c. F.18.

Fish are typically acquired from commercial fishing of public bodies of water or from aquaculture operations. Although it is sometimes used with a broader meaning, in this context, aquaculture refers to the raising of fish either in private or public water.

8.5 Food Safety Risks – Fish Processors

The food safety risks associated with the processing of fish for human consumption are similar to those associated with the production of animal meat for human consumption, in that they can include biological, chemical and physical hazards.

Fish meat can carry or be a vector for agents which may cause illness in humans.[58] There is an increased risk with some fish processing activities and fish or fish products which are sold to be eaten without further preparation or cooking.[59] Fish meat can contain residues of chemicals at a level which is harmful for a human to consume, such as residues of cadmium and mercury. Fish meat can contain physical hazards which may cause harm to human health such as metal particles from the processing of fish, bones, and shell fragments. In addition, raw fish spoils much faster than meat from warm-blooded animals.

Fish meat is mixed with animal meat products in some food products and as such, can be used in the processing of food at abattoirs. Fish are also separately processed at meat processing plants connected to and separate from abattoirs. The mixing or presence of fish in animal meat processing facilities creates a risk of contamination of the inspected meat.

8.6 Current System – Fish Processors

As with meat, there are two systems – federal and provincial.

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[58] Such as *listeria monocytogenes, E. Coli, salmonella, staphylococci*, and *vibrio cholerae* which can cause *V. parahaemolyticus*-associated gastroenteritis infections in humans. U.S. Food and Drug Administration, *Center for Food Safety & Applied Nutrition, Foodborne Pathogenic Microorganisms and Natural Toxins Handbook*, available from http://vm.cfsan.fda.gov/~mow/chap9.html [accessed 19 May 2004]; CFIA, *Bacteriological Guidelines For Fish and Fish Products*, available from http://www.inspection.gc.ca/english/anima/fispoi/guide/bace.shtml [accessed 19 May 2004].

[59] Ready-to-eat meat products are fish products purchased by consumers and eaten without further preparation or cooking. Some food dishes and food products are prepared with raw fish, such as sushi. Raw fish, including mackerel and salmon, can contain living parasites such as Anisakis which can reproduce or survive in the human intestines after the raw fish is eaten.

8.6.1 Federal Legislation and System

The federal government enacted a number of pieces of legislation which address food safety and govern fishing and fish processing. The *Fish Inspection Act* (Canada)[60] is the primary legislation as it regulates the processing of fish and fish products that are transported between provinces or exported from Canada. Some of the other legislation deals indirectly with food safety by controlling the nature of collected fish, the surveillance and response to fish diseases, and fish vaccines and fish feeds.[61]

The *Fish Inspection Act* (Canada) and the *Meat Inspection Act* (Canada)[62] and their regulations prohibit the processing of a mixed fish and meat product except in accordance with the provisions of those statutes and further prohibit the use of meat or fish that was not processed in a federally inspected plant or imported into Canada in accordance with them to prevent contamination.[63]

8.6.2 Ontario Legislation and System

The *Fish and Wildlife Conservation Act* (*FWCA*)[64] provides for the management of all of Ontario's fish and wildlife resources. The Ministry of Natural Resources (MNR) administers the *FWCA* and issues licences to culture and sell fish, stock fish, and collect fish from Ontario waters including licences to operate an aquaculture business and to collect fish from public waters.

The MNR also administers the *Fish Inspection Act* (Ontario) (*FIA*).[65] The *FIA* and its regulation both set out certain standards to address food safety, such as requirements for chilling or icing of fish during storage and prevention of contamination during loading and unloading[66] and prohibit the sale of tainted, decomposed or unwholesome fish.[67] However, there is no inspection program in place by the MNR to inspect non-federally registered fish processors to ensure that the processing activities, equipment and facility meet the food safety standards contained in the *FIA* and its regulation. The MNR only exercises its authority under Ontario legislation to prevent the sale of fish which was harvested illegally.

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[60] *Fish Inspection Act* (Canada), R.S.C. 1985, c. F-12.

[61] *Fisheries Act* (Canada), R.S.C. 1985, c. F-14, *Fish Health Protection Regulations*, C.R.C., c. 812, and *Ontario Fishery Regulations, 1989*, SOR/89-93, *Health of Animals Act, 1990*, c. 21, *Feeds Act*, R.S.C. 1985, c. F-9, *Food and Drugs Act*, R.S.C. 1985, c. F-27.

[62] *Meat Inspection Act* (Canada), R.S.C. 1985, c. 25.

[63] *Fish Inspection Regulations*, C.R.C. c. 802, s. 3(2)(b) and *Meat Inspection Regulations, 1990*, SOR/90-288, s. 3(l).

[64] *Fish and Wildlife Conservation Act*, 1997, S.O. 1997, c. 1.

[65] *FIA*, *supra* note 57.

[66] R.R.O. 1990, Reg. 456, ss. 2, 3, 10, & 11.

There are no provisions in any Ontario legislation that are similar to those in corresponding federal legislation that regulate the mixing of fish and meat in the processing of these commodities at provincially regulated facilities to prevent contamination by uninspected fish or meat.

Fish processors in Ontario may be inspected by the Boards of Health against food safety standards established by the *Food Premises* regulation under the *HPPA*.[68] The *Food Premises* regulation does not prohibit uninspected fish or fish meat from being processed at food premises or mixed with inspected animal meat in processing activities.

8.6.3 Licensing, Inspection and Enforcement

Under the *Fish Inspection Act* (Canada), all establishments at which fish and fish products are processed for export are required to register with some listed exemptions.[69] The plants pay a licence fee and contribute to the cost of inspection. Inspection of those fish processing plants is mandatory.

The purpose of the federal fish inspection program is to ensure that the fish is safe and wholesome and includes both safety and quality aspects. The inspection of processing plants by the federal government under the *Fish Inspection Act* (Canada) has been conducted under a regulatory verification model since 1992. The inspection program, the Quality Management Program (QMP), is now implemented by the CFIA. The QMP requires each federal fish processing plant to adhere to certain plans that are designed to ensure food safety. CFIA inspectors are not present for all hours of operation, but conduct audit type inspections of the plant records to ensure compliance with the QMP, verify that the requisite plans are being applied as intended, and determine whether regulatory requirements are being met. The frequency of audits depends on the risk assessment of plants based on compliance history and the nature of processing activities.

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[67] *FIA, supra* note 57, s. 7.

[68] *Food Premises* regulation, supra note 12.

[69] *Fish Inspection Act,* (Canada), *supra* note 60, as amended, *Fish Inspection Regulations*, C.R.C., c. 802, s. 14.

Under the *FIA*, fish processors are not required to register or obtain a licence to operate in Ontario. Inspectors under the *FIA* are permitted to enter any establishment or vehicle used for the storage or transport of fish, require records relating to the processing, transporting or marketing of fish to be produced, and take samples of fish for inspection, but inspection is not mandatory and no systemic inspection is conducted by the province.[70]

The *Fish Inspection Act* (Canada) was amended in 1997 to bring it in line with the rest of the federal food inspection legislation.[71] The amendments increased the penalties for committing offences under the Act, gave inspectors some powers of peace officers and increased the powers of inspection to cover the entire continuum of "sea-to-plate" or "boat-to-throat."[72] Prosecutions for summary conviction offences under the *Fish Inspection Act* (Canada) can be commenced within two years after the subject matter becomes known to the Minister.[73]

The *FIA* was amended in 1999 to increase the penalties for committing offences under the Act and to extend the period of time permitted for the commencement of a prosecution to two years.[74] However, the *FIA* is not consistent with other provincial or federal food inspection legislation in that there is no licensing requirement for fish processing plants and, therefore, no regulatory enforcement provisions.

8.6.4 The Industry

Aquaculture grew rapidly in Ontario from the mid-1980s to mid-1990s. The commercial aquaculture industry in Ontario has grown to a value of $40 million annually. In 2001, an estimated 4,135 tonnes of rainbow trout was produced from approximately 200 facilities.[75] In 1995, rainbow trout accounted for over 95% of the production output from Ontario aquaculture. This was partially a result of the legislative restrictions on the species which could be legally farmed. However, amendments to the provincial legislation in 1995 expanded the number of aquatic species permitted to be cultured to 38. By 2001, several other species were being produced including tilapia, arctic char, brook trout, small mouth and large mouth bass, and cyprinid bait fish.[76] Most Ontario trout are sold to processors, fish markets or directly to grocery stores and restaurants throughout the province and Northeastern U.S. Ontario trout is typically sold live, fresh, whole, smoked or filleted.[77] Ontario aquaculture operations are governed by federal and provincial legislation dealing with the management of fisheries.

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[70] *FIA*, *supra* note 57, s. 3.

[71] Department of Fisheries and Oceans Canada, News Release, *Minister Mifflin Introduces a new Fish Inspection Act* (31 October 1996).

[72] *Fish Inspection Act* (Canada), *supra* note 60, ss. 6, 7, 8, 17.1 and 17.2.

[73] *Ibid.*, s. 17.2(1).

[74] *FIA*, *supra* note 57, ss. 9(1), 10.1.

One estimate is that there are 147 non-federally registered fish processors in Ontario and that the majority of the processors are small or very small enterprises that operate on a seasonal basis. Fish processed in Ontario for consumption in Ontario comes from Ontario's lakes and rivers (commercial fishing), aquaculture operations and other parts of Canada and the world.

The processing of fish at the non-federally registered fish processors includes both low and high risk processing activities. Activities such as cleaning, scaling, icing, eviscerating, filleting, mincing, comminuting, reforming, extruding, shucking, deshelling, breading, freezing, and repackaging are considered to present lower risks to consumers as the products usually undergo further preparation such as cooking prior to consumption. However, some fish processing activities including cooking, smoking, salting, drying, pickling/marinating, preparing ready-to-eat (sushi) products, vacuum packaging of these products or canning are considered to be high risk to food safety as the products are ready-to-eat and receive no further preparation prior to consumption.

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[75] R. Moccia et al., *An Overview of Aquaculture in Ontario* (University of Guelph, AEC Order No. 96-003, January 1997).

[76] *Ibid*, and R. Moccia & D. Bevan, *Aquastats 2001: Ontario Aquaculture Production in 2001* (University of Guelph, Order No. 03-001, February 2003).

[77] R. Moccia et al., *An Overview of Aquaculture in Ontario*, *supra* note 75.

8.7 The Future – Fish Processors

At present, non-federally registered fish processors in Ontario are not licensed or inspected. Under the present use of the term "meat" in the *MIA*, fish is not meat. Under the present *FIA*, there is no requirement for inspection nor any requirement for licensing. Either Act would require significant amendments to put in place a mandatory fish inspection system. However, the definition of food and agricultural or aquatic commodity in the *FSQA* makes the scope of the *FSQA* broad enough to permit a regulation under the *FSQA* implementing a fish inspection system to address the food safety risks at fish processing plants consistent with other parts of the food safety system in Ontario and Canada.

OMAF has surveyed non-federally registered fish processors who are subject to the provincial regulatory system under the *FIA* to assist in the development of a food fish inspection program. It was determined that a majority of the non-federally registered fish processors may have employee training, pest control, effluent treatment including blood, water treatment, tainted product detection and recall programs in place at their facilities. However, the levels of implementation of these programs were lower than in federally registered fish processors and the non-federally registered processors lacked written documentation for their programs. This indicates that there are some risks that are not presently being controlled at the fish processing plants and, therefore, there is a need to develop and implement a fish inspection program in Ontario.

It is recognized by the federal government and by the Codex Alimentarius Commission (CAC), that fish is one of the foods within a food safety system that should be included in a regulatory and legislative scheme.

The Recommended International Code of Practice for Fresh Fish of the CAC comments that:

> *Fresh fish are an extremely perishable food, and should be handled at all times with great care and in such a way as to inhibit multiplication of micro-organisms.*[78]

In my view, the lack of a fish inspection program in Ontario to ensure safe fish and fish products constitutes a risk to the public. I, therefore, believe that it is important that fish inspection be included in the food safety system in Ontario. A fish inspection program should be consistent with the standards applied to products from livestock and poultry. It should ensure that those who consume fish are given the same protection as those who consume meat. It should also ensure that the safety of food from livestock and poultry is not put at risk by uninspected fish. A fish inspection program should be developed which is adapted specifically to deal with the particular features and risks of fish processing.

I recommend that the provincial government develop and implement a fish inspection program and promulgate a regulation under the *Food Safety and Quality Act, 2001* to licence non-federally registered fish processing plants and regulate the safety of fish being sold for human consumption in Ontario. This regulation should replace the *FIA* and regulate fish sold in Ontario to standards consistent with established international and federal standards. The fish inspection program should include mandatory inspection and a HACCP-based food safety program consistent with my recommendations in Chapter 3.

I recommend that the *Food Premises* regulation be amended to include fish and the processing of fish at food premises and to prohibit uninspected fish at food premises, once an inspection program is implemented.

In order to avoid hardship to provincial fish processing plants, the timing of this amendment should coincide with the implementation of the fish inspection system.

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[78] Codex Alimentarius Commission, *Recommended International Code of Practice for Fresh Fish*, CAC/RCP-1976, vol. 9.

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Chapter 9 - Meat Retail and Distribution

9.1 Introduction

There are thousands of businesses in Ontario which distribute and/or deliver meat and meat products directly to consumers including warehouse distributors, hotels, institutions, restaurants, caterers, grocery stores, and retail stores. Some of these businesses are part of a larger meat or food processing operation such as a free standing meat processor or abattoir, but most are not. These businesses are currently subject to inspections by public health inspectors pursuant to the *Health Protection and Promotion Act* (*HPPA*).[1]

While food safety is important at all stages of the food continuum, it is especially so in the retail and distribution stage where the meat will be sold, sometimes in a ready-to-eat form, to the consumer. Meat that is not properly stored, handled, or prepared at any food service premises may not be safe for consumption.

9.2 Food Safety Issues

The risks to food safety that are present at other stages in the continuum can also be present at the food service, retail and distribution stage.[2] Biological hazards are a significant concern, especially where the meat is not stored or cooked at a safe temperature, or where new or additional micro-organisms are introduced into the meat through contamination from food handlers, equipment or other foods. Chemical hazards can be introduced to the meat if it is not protected from contamination during handling, storage, cooking or processing. Physical hazards such as sharp objects can also contaminate meat if it is not properly protected from external contaminants.

Risk controls implemented to minimize or eliminate hazards at earlier stages along the meat production continuum can be negated by a failure to control risks at this stage.

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[1] *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7.

[2] See the portion of the chart of the assessment of the biological, chemical and physical hazards for retailers at Appendix F.

9.3 Current Ontario System

9.3.1 Legislation

The prevention and management of risks in meat retail and distribution falls within the scope of authority of the Public Health Branch of the Ministry of Health and Long-Term Care (MOHLTC) and the Boards of Health across Ontario. The purpose of the governing legislation, the *HPPA*, is:

> *... to provide for the organization and delivery of public health programs and services, the prevention of the spread of disease and the promotion and protection of the health of the people of Ontario.*[3]

Under the *HPPA*, every Board of Health is required to ensure the provision of health programs and services in a number of areas related to food safety including: ensuring the maintenance of sanitary conditions and the prevention or elimination of health hazards; controlling of reportable diseases including foodborne illnesses;[4] and, collecting and analyzing epidemiological data.[5] Further food safety protection is provided by prohibiting the sale of any food that is unfit for human consumption by reason of disease, adulteration, impurity or other cause.[6]

Under the *HPPA*, medical officers of health are obligated to ensure inspection of food premises in the health unit for the purpose of preventing, eliminating and decreasing the effects of health hazards and to investigate complaints of health hazards.[7]

Food premises include premises where meat is processed, prepared, stored, handled, displayed, distributed, transported, sold or offered for sale.[8] This means the scope of the authority and responsibility of the Boards of Health is very broad and includes all businesses which distribute and/or deliver meat or meat products directly to the consumer.

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[3] *HPPA, supra* note 1, s. 2.

[4] Under the *Specification of Reportable Diseases* regulation made under the *HPPA*, the following foodborne illnesses are reportable diseases: *botulism, campylobacter enteritis*, food poisoning, institutional outbreaks of gastroenteritis, *listeriosis, salmonellosis, shigellosis, trichinosis*, and *yersiniosis*. O. Reg. 559/91 amended to O. Reg. 96/03.

[5] *HPPA, supra* note 1, s. 5.

[6] *Ibid.*, s.17.

[7] *Ibid.*, ss.10. & 11.

[8] *Ibid.*, s.1.

9.3.2 Jurisdiction and Funding

In general, the MOHLTC develops the guidelines for food safety programs, the Boards of Health set the budget and the policies for the health unit,[9] and the medical officer of health[10] oversees the day-to-day operations of the health unit.

All areas of Ontario have a Board of Health that provides public health programs and services under the *HPPA* except areas of the province which do not form part of a municipality and are referred to as unorganized territories. The provincial government provides 100% funding for public health programs and services in the unorganized territories. The public health funding provided to the unorganized territories remained the same for at least twelve years and as of 2003, was below the per capita rate for public health spending across Ontario.[11]

There is no statutory funding formula for the apportionment of the costs of public health programs and services as between the provincial government and municipalities.[12] The amount of funding provided by the provincial government to Boards of Health has varied between 0 and 75%.[13] Each medical officer of health ensure a budget is prepared and given to its Board of Health and the MOHLTC for approval. Upon approval, the municipality or municipalities within the health unit and the provincial government are to provide funds. For the last four years, the provincial government has provided funding to the Boards of Health for approximately 50% of their approved budgets with the balance paid by the municipalities.[14] In addition, the provincial government has provided other funds to public health units, on request, for emergency or unexpected costs, such as those associated with the SARS outbreak and *E. coli* in Walkerton's water. A recent announcement by the provincial government promises to increase funding by 5% per annum over the next five years until it reaches 75%.

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[9] The term "health unit" is commonly used to refer to the organization that provides public health services in an area, however the *HPPA* uses it to refer to the geographical jurisdiction of the Board of Health within which the Board of Health is responsible to provide public health services and programs. *HPPA, supra* note 1, s.1.

[10] Boards of Health are obligated to appoint a full time medical officer of health (MOH) or a physician to be acting medical officer of health where the office of MOH is vacant or the MOH is absent or unable to act under s.62 of the *HPPA, supra* note 1.

[11] The per capita rate amongst the thirty-seven Boards of Health ranged between $23 to $65 with an average of $37 in 2002. *2003 Annual Report of the Office of the Provincial Auditor of Ontario*, s. 309 In 2003, the statistics were similar with a range from $23.38 to $62.84 with an average of $40.28. Canadian Institute of Public Health Inspectors Ontario Branch Inc., *Health Unit PHI Staffing 2003*, available from http://action.web.ca/home/ciphiont/readingroom.shtml?sh_itm=38e55b2d62af04a7a1433a1ad3e2cad6 [accessed 26 May 2004].

[12] The province is permitted, but not required to contribute to provision of services under the *HPPA*. See *HPPA, supra* note 1, s.76.

[13] For mandatory programs and services. Typically, the province does not contribute to certain capital costs such as building costs.

There have been problems with the funding system. One particular irritant is the difference in fiscal years. The Boards of Health operate on the calendar year while the fiscal year-end for the province is March 31. It is often late in the calendar year before the Boards receive the approval and funding they sought when their budgets were set and too often the MOHLTC asks the Boards to provide additional programs after their budgets have been finalized.

In 2004, the MOHLTC obtained approval for 50% funding for additional public health inspectors at Boards of Health across Ontario. However, not all of the Boards of Health have been able to obtain approval from their municipalities for the other 50% needed to hire the additional inspectors. There are municipalities that are having difficulties finding the funding to provide required services and may have to reduce their existing complement of public health inspectors.

I am advised that Ontario is the only province where municipalities pay for public health. Although many stakeholders recognize the difficulties associated with split funding, many also identify a need to tailor services for a particular community. Participation in the funding process gives municipalities an opportunity to consider and address those needs.

9.3.3 Regulatory and Inspection Scheme

The MOHLTC has developed and published Mandatory Health Programs and Services Guidelines since 1984 with the most recent revision in

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[14] The MOHLTC has provided funding in excess of 50% for some specific programs.

December 1997 (the "Mandatory Programs").[15] The Mandatory Programs set out requirements and standards that every Board of Health must follow, including standards for programs relating to "infectious diseases" and "food safety."

The goal of the food safety program is to "improve the health of the population by reducing the incidence of foodborne illness". The objectives are to ensure that food is stored, prepared, served and distributed in a manner consistent with accepted public health practices and to stop the sale or distribution of food that is unfit for human consumption.

In terms of inspection and requirements for food premises, the Mandatory Programs require that Boards of Health:

- assess all food premises annually to determine their risk status at high, medium or low according to the MOHLTC's HACCP protocol;[16]
- provide inspections of all food premises, to ensure compliance with the *Food Premises* regulation[17] under the *HPPA*. At least three inspections of high risk food premises, two inspections of medium risk food premises, and one inspection of low risk food premises are to be completed each year. Further inspections are to be completed as necessary to ensure correction of non-compliance, investigation of foodborne illnesses and foodborne outbreaks, investigation of food-related consumer complaints within 24 hours of notification, and compliance with food recalls;

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[15] *HPPA, supra* note 1, s.7.

[16] The *Hazard Analysis Critical Control Point Protocol* of the MOHLTC, January 1, 1998, sets out guidelines for the assessment of risk of food premises. For example, high risk food premises prepare hazardous foods and service a high risk population (ex. full menu daycares), use processes involving many steps and foods frequently implicated as the cause of foodborne illness, or are implicated or confirmed as the cause of foodborne illness within the last year. Medium risk food premises prepare hazardous foods without meeting the criteria for high risk (ex. fast food restaurants) or prepare non-hazardous foods without extensive handling or high volume (ex. bakeries). Low risk food premises do not prepare hazardous foods, but may serve pre-packaged hazardous foods or store non-hazardous foods only (ex. some food banks).

[17] R.R.O. 1990, Reg.562, as amended.

- ensure that food handler training courses are provided in accordance with the MOHLTC's food handler training protocol to food handlers in high and medium risk food premises.

In addition to food premises inspection, the Mandatory Programs require that Boards of Health undertake food recalls in accordance with the MOHLTC's food recall protocol, provide semi-annual and annual food safety data to the MOHLTC and have a written protocol for responding to food-related complaints, based on a risk-assessment approach.

The *Food Premises* regulation applies to most food premises[18] in Ontario and sets out the requirements that must be met to operate a food premises. Operating a food premises which does not comply with these requirements is prohibited.[19] The standard requirements for food premises relate to: building maintenance; required equipment and maintenance; manufactured meat products and meat; maintenance of furniture and appliances, cleanliness and sanitation; and, employees or operators who handle food.

On March 29, 2004, a regulation amending the *Food Premises* regulation, which becomes effective September 1, 2004, was filed.[20] Most of the amendments are designed to protect food safety including specific standards to be met for the cooking, re-heating, freezing and refrigeration of certain meat and fish products. The amendment also imposes a prohibition on uninspected meat at food premises with the exception of meat obtained through hunting.

9.3.4 Licensing

Food premises are not currently licensed by the MOHLTC or the Boards of Health. A person who intends to commence operation of a food premises is required to give notice of that intention to the local medical officer of health. No fee or documentation is required and there is no requirement to advise that a food premises is closing.[21] During the course of the Review, I was advised that there are many operators of food premises who do not comply with this requirement and although many of them do come to the attention of Boards of Health by other means, it is likely that some food premises are not being inspected because Boards of Health are not aware of their existence.

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[18] R.R.O. 1990, Reg. 562, as amended exempts some boarding houses, camps in unorganized territory and recreational camps, and churches, service clubs and fraternal organizations which prepare and serve meals for special events for their members and personally invited guests.

[19] The *Food Premises* regulation sets standard requirements for all food premises except exempted food premises and some categories of food premises which only have limited requirements such as catering vehicles, mobile preparation premises, vending machines, and locker plants.

[20] O. Reg. 74/04.

In Ontario, municipalities are permitted to make by-laws to require all or some classes of food premises to either register or apply for a licence.[22] Municipalities may charge fees for licences, but those fees are not to exceed the costs directly related to the administration and enforcement of the by-law licensing that class of business.[23] The fees charged by each municipality vary depending on the type of food premises, but typically range from $50 to $320 per year.[24] Some municipalities do not exercise this licensing power, while others only license a few classes of food premises.

Although municipalities keep lists of registered or licensed food premises and, pursuant to the *Municipal Act, 2001*, will be required to establish and maintain such lists before Janaury 1, 2005,[25] they do not routinely share this information with the Boards of Health.

It is a waste of resources to have inspectors spending their time locating food premises that have failed to notify the medical officer of health. Food premises should be required to register upon opening and to provide ongoing and up-to-date information on their location and the nature of their business to their Board of Health.

I recommend that the provincial government amend the *Health Protection and Promotion Act* to require each food premises in Ontario

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[21] *HPPA, supra* note 1, s. 16.

[22] *Municipal Act, 2001*, S.O. 2001, c. 25, [hereinafter *Municipal Act, 2001*] s. 150 (licensing of businesses), s. 157 (registering of businesses).

[23] *Ibid.*, s. 150(9).

[24] Several municipalities charge different fees for different classes of food premises with categories for refreshment vehicles such as hot dog vendors and food stands, food shops such as butcher shops and fish stores, and restaurants/eating establishments.

[25] *Municipal Act, 2001, supra* note 22, s. 158.

to register with the Board of Health in the jurisdiction in which the food premises carries on business.

In implementing this recommendation, the provincial government should amend the *HPPA* or the *Food Premises* regulation to require every food premises to pay a fee to cover the administrative costs of the registration system. The amendments to the legislation or regulation should give public health inspectors the specific authority to order that a food premises be closed until it has complied with the registration requirements.

9.3.5 Surveillance, Testing and Traceability

The MOHLTC and the Boards of Health are responsible for assessing the level of foodborne illness in Ontario and should be identifying, measuring, and tracking illnesses, analyzing the data for trends, investigating potential hazards and outbreaks, responding to outbreaks and attempting to design programs and services to prevent foodborne illnesses. In Chapter 3, I addressed the issues of surveillance of foodborne illness including testing of meat products and traceability.

The goal of the Ontario food safety system must be to protect human health and in order to achieve this goal, the food safety system must be informed by its risks. Information about risks comes from illness and meat product surveillance.At present, there is no requirement to label meat with sufficient details to permit an easy and efficient traceback. Under the *HPPA*, the operators of food premises in which meat products are manufactured are required to keep records for at least one year of meats received for processing including, the kinds of meats, the names and addresses of suppliers, weights and the dates of receipt.[26] These records can provide assistance during a recall or health hazard or foodborne illness investigation, but the assistance is limited. It is difficult to access the records when the food premises is closed or the operators cannot be located. Also, I was advised that the records are often inaccurate, outdated or incomplete. They may indicate the volume of meat purchased, but not always which specific meat products were received on a particular date.

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[26] *HPPA*, *supra* note 1, ss. 16(4) & (5) and *Food Premises*, R.R.O. 1990, Reg. 562 as amended.

Earlier in this Report, I recommended the development of a traceability system for meat throughout the continuum. The system should include the meat distribution and retail sector and collect and retain sufficient information to ensure that food recalls and health hazard and foodborne illness investigations can be thoroughly and efficiently conducted.

9.3.6 Inspectorate

Boards of Health in Ontario are required to employ inspectors who are either veterinarians or hold a Certificate in Public Health Inspection (Canada) granted by the Canadian Institute of Public Health Inspectors (CIPHI).[27] A Certificate in Public Health Inspection (Canada) is granted by the CIPHI to persons who fulfill specific requirements. They must complete one of five accredited programs offered at five post-secondary educational institutions across Canada,[28] pass a certification examination, and complete at least 12 weeks of a practicum under the supervision of a qualified person.

The prerequisite educational programs address over 450 instructional objectives including the risks and regulation of food establishments, disease control, zoonotic diseases, and foodborne and enteric diseases. The five accredited programs range from 2 to 4 years, depending on whether the candidate has already completed another post-secondary education program.

The mandatory national requirement for a specified post-secondary qualification, a standardized examination and a practicum prior to certification is far beyond the prerequisite education and training required of meat inspectors hired by either OMAF or the Canadian Food Inspection Agency (CFIA).

Public health inspectors are not subject to any ongoing continuing education requirements, other than those mandated by their employers. Public health inspectors are not self-regulated under legislation, like some professions and as a consequence, there are few steps that CIPHI can take to ensure that a public health inspector adheres to its code of conduct or receives any minimum continuing education to ensure that the inspector remains knowledgeable and competent. Their certificates are granted once, are not renewed and cannot be revoked.

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[27] *Qualifications of Boards of Health Staff*, R.R.O. 1990, Reg., 566, amended to O. Reg. 630/00, s.5.

[28] Ryerson Polytechnical University, British Columbia Institute of Technology, Concordia University College of Alberta, University College of Cape Breton and First Nations University of Canada.

Only one out of 29 health units who provided responses to my request for information advised that it had enough public health inspectors to complete the Mandatory Programs and it added a caveat that the staffing was only sufficient in the absence of emergencies. Most indicated that between one to ten more inspectors were needed to meet the requirements of the Mandatory Programs. In light of the information I received regarding insufficient staffing, resources and budgets, it is not surprising that I heard frank admissions from public health inspectors that the ongoing training for them was insufficient and not consistent.

There are new and emerging issues which present a challenge to the meat inspection and regulatory system in Ontario. This challenge cannot be met unless the inspectorate, the primary line of defence, is kept informed through continuing education. For example, butchers who dress cows slaughtered on farm by a producer are required by law to remove specified portions of the carcasses which are at highest risk to contain the agents which cause mad cow disease[29]. A public health inspector who is not trained in emerging issues such as mad cow disease may not be properly prepared to ensure that meat processors are following these requirements.

I recommend that the Ministry of Health and Long-Term Care develop and implement a plan for the continuing education and training of public health inspectors across the province addressing meat safety and the regulatory standards for food premises.

The plan should be developed in consultation with Boards of Health and CIPHI which has an interest and expertise in the training of inspectors.

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[29] *Health of Animals Regulations*, C.R.C., c. 296, s. 6.2.

9.3.7 Food Handler Training / Certification

There are significant food safety risks such as contamination and growth of pathogens in meat that can be alternatively increased or minimized depending on the manner in which food is handled during preparation, storage and transport. For this reason, it is important that those who handle and prepare meat products receive food handler training.

Food handler training typically includes education on issues including:

- foodborne illness and allergies;
- food safety (hazards, food spoilage and food microbiology, safe food handling and preparation including time-temperature control, contamination, hand washing, personal hygiene, HACCP); and
- food premises sanitation (sanitizing, cleaning, and pest control).

Frequently, courses on food handling also include information on issues which may promote compliance with the regulatory regime including:

- legislation and regulation (the *HPPA*, the *Food Premises* regulation and municipal by-laws);
- the role and responsibilities of food premises, health units, and public health inspectors in the food safety system.

Some retail, grocery and food service stakeholders would like to see nationally accepted food safety or food handler training, but do not object to current service providers including colleges, Boards of Health, and public service organizations continuing to offer courses and proctor examinations.[30] At present, despite the requirement of the Boards of Health to provide food handler training to the public, food handlers at food premises are not required to have such training. There have been proposals made in the past decade in Ontario to amend the *HPPA* or the *Food Premises* regulation to require a minimum level of food handler training for persons working in food premises, however, no such amendments have been made.

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[30] A number of courses have been developed by different food premises sectors, including some on a national scale, however, there is no nationally accepted course for use by all sectors.

There are several municipalities across Canada which require food handler training through municipal by-laws including Winnipeg, Manitoba and Brantford, Ontario. There are also a number of provinces that require that at least one person with food safety training be on the food premises or available during all hours of operation and some also require the operator of the business to have such training.[31]

Although the training and courses vary greatly, all of the 37 Boards of Health in Ontario offer food handler training courses with certification and some also offer basic food safety training without certification. In 2003, 17,885 food handlers were certified by the Boards of Health across Ontario.

Both the Toronto Public Health Unit and York Region Health Services Department developed food handler certification programs which have been adapted and used by several other Boards of Health.[32] Some Boards of Health certify individuals who have taken courses offered by agencies other than health units, such as the TVOntario web-based course[33] and the Ontario Independent Meat Processors' food handler training course. Other Boards of Health that responded to the Review advised that the food safety training they provided was based on courses they had developed. It appears that there are at least 19 different food safety and food handler training programs offered by the Boards of Health.

I commend the efforts of those who developed the materials for the programs being offered by the Boards of Healthin Ontario. Many of them are training or certifying large numbers of individuals each year from a variety of food premises in their jurisdictions. However, I am concerned about the duplication of effort and inefficient use of resources in offering 19 different courses that have the same goal.

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[31] Alberta, British Columbia and Saskatchewan.

[32] Toronto Public Health Unit, *Food Handler Certification Program* (3rd ed., 2001), available from http://www.toronto.ca/health/foodhandler/fh_index.htm [accessed 26 May 2004] and York Regional Health Unit, *PROTON – Food Handler Certification Program*, available from http://www.region.york.on.ca/Services/Public+Health+and+Safety/Food+Safety/PROTON.htm [accessed 26 May 2004].

[33] In Good Hands is a Lifelong Learning Challenge Fund project which is financially supported by the Government of Ontario. TVOntario, Contact North/Contact Nord, the Thunder Bay District Health Unit, Norlink Communications and Mr. Submarine Ltd. are involved in the development of the In Good Hands online workplace training course. http://www.ingoodhands.ca/about.html [accessed 26 May 2004].

There is convincing evidence that food handler training improves the likelihood that a food premises will comply with the food safety requirements of the *Food Premises* regulation.[34] Food handler training can also provide benefits to the individuals, their families and anyone to whom they may serve food at their homes.

I heard from several stakeholders that there is significant turnover of staff at some food premises, especially fast food and seasonal premises, which makes mandatory food handler training for all food handlers at those premises impracticable. It is noted, however, that there are many training programs in Ontario designed for individuals in certain employment sectors to educate them in risk assessment and control. These include Workplace Hazardous Materials Information System training, the Smart Serve Responsible Server Training Program, babysitting courses and first aid courses. Some of these programs are required by employers as a prerequisite to hiring, while others are mandated by legislation. The risks to the public associated with food handling at food premises are as dangerous as the risks addressed by these other training programs and as such, it is not unreasonable for the public to expect and require training for food handlers at food premises.

Operators who have authority to manage and control the actions of staff and implement safe food handling procedures must, at a minimum, have a base level of knowledge of safe food handling.

I recommend that the provincial government amend the *Health Protection and Promotion Act* to require that the operator of a food premises and at least one staff member, present at a food premises during all hours of operation, be a certified safe food handler.

Certification would be achieved upon the successful completion of a standardized food handler examination. Most people would need to take a food handler training course to successfully pass the examination unless they had training through other education or experience. Re-certification should be required every five years. The mandatory food handler course or examination should be phased in over a period no longer than two years for high and medium risk food premises. The MOHLTC should work with its provincial counterparts in other provinces and industry to work towards a national standard for food handler training and ensure that the Ontario system is consistent with the national standard.

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[34] Toronto Public Health Unit, Healthy Environments Services, *Food Premises Inspection and Disclosure System: Evaluation Report* (17 December 2002).

9.3.8 HACCP

There is no requirement that all food premises have HACCP-based food safety programs in place although HACCP principles are being used in the inspection and regulation system of food premises. Boards of Health are directed under the Mandatory Programs to conduct HACCP-based audits of food premises which are determined by the health unit to be "high risk."

Earlier in this Report, I recommended that mandatory HACCP-based programs be implemented throughout the meat production continuum. There is controversy about implementing such programs on a mandatory basis in all food premises as some argue that small operations such as seasonal stalls and small restaurants will not be able to implement a rigorous and structured HACCP program. In addition, some retail and grocery stakeholders expressed concern about whether HACCP-based plans should be applied to all portions of their operations.

Certain industry organizations have developed or are presently developing HACCP-based programs or food safety programs within quality assurance or branding programs and encourage implementation by all their members.[35]

A project in Ontario assessed whether a HACCP-based program to identify generic risk factors, educate staff and management, and encourage monitoring of the risk factors by staff and management would be effective in food service establishments. The results showed that the operators of the test sites were more likely to have increased knowledge and improved practices and continue to use the program.[36] The study recommended that further work be done to expand and evaluate the use of HACCP-based programs at all food premises.

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[35] Examples include the Canadian Restaurant and Food Services Association and Canadian Council of Grocery Distributors for food service, warehouses and grocery stores.

[36] Central West Food Safety Project, *The Efficacy of Applying HACCP principles to Small-Scale Food Service Premises*, presentation at CIPHI Ontario Branch Conference (October 2003).

I recognize that the implementation of my recommendation that HACCP-based programs be required in all food premises will take some time. HACCP-based programs for food premises have not yet been developed by the provincial government as has been done for food manufacturers.[37] I believe that mandatory HACCP-based programs in food premises should be introduced in stages over a reasonable period of time.

First, MOHLTC, in conjunction with public health units and industry, should develop a HACCP-based program for food retail premises. The program should adhere to internationally recognized food safety standards, guidelines and principles including Codex Alimentarius and be designed to meet the specific requirements of different categories of food retail premises. Second, the program should be tested by implementation on a voluntary basis and assessed to determine whether it is effective in improving food safety and whether it should be implemented in all food premises or restricted to those that are medium and high risk. A study should also be undertaken to determine what support and assistance small and medium-sized enterprises (SMEs) will need to implement mandatory HACCP-based programs. Third, the government should make HACCP-based programs mandatory for at least medium and high risk food premises.

I recommend that the provincial government in cooperation with the food industry develop a HACCP-based food safety program for food premises in Ontario.

9.4 Meat Retail and Distribution Standards

There are three systems of inspection and standards for food premises in Canada – federal meat inspection, provincial meat inspection and public health inspection.

The *Meat Inspection Act* (Ontario) sets out specific requirements for meat processing operations in abattoirs which OMAF inspectors ensure are met.

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[37] The HACCP Advantage program for meat processors.

The *Meat Inspection Act* (Canada) sets out specific requirements for meat processing operations, distributors and retailers which sell meat or meat products interprovincially or internationally and CFIA inspectors ensure they are met. Each province in Canada has a different system of public health inspections for their meat processors and meat retailers. Although most provinces require public health inspections of food premises, the standards set out in their health legislation range from basic to sophisticated. In British Columbia, for example, food premises have been required to have HACCP-based plans since July 2000.[38]

Some retail, grocery and food service stakeholders want the standards for their businesses harmonized across the country as chains operate nationwide and find it costly and confusing to meet different standards in different provinces. The stakeholders suggest that the Food Retail and Food Services Regulation and Code should be the basis for the standards in each province.[39] In my view, consistent standards across the country is a worthy goal which should be supported and pursued. Until that is achieved, the provincial government should at least ensure that all meat retail operations in Ontario, whether attached to an abattoir operation or separate from it, are subject to the same standards.

I recommend that the provincial government ensure that the standards for all meat retailers be consistent whether under the *Food Premises* regulation or pursuant to any regulation developed under the *Food Safety and Quality Act, 2001*.

9.5 Public Health in Ontario and the Delivery of Public Health Food Safety Programs in Ontario

At present, food premises of all types except provincially and federally inspected abattoirs and attached processing and retail operations, are inspected by public health inspectors.

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[38] Written procedures to identify and address critical control points, steps or locations which could cause a health hazard under the *Food Premises* Regulation, B.C. Reg. 210/99, as amended up to B.C. Reg.361/99.

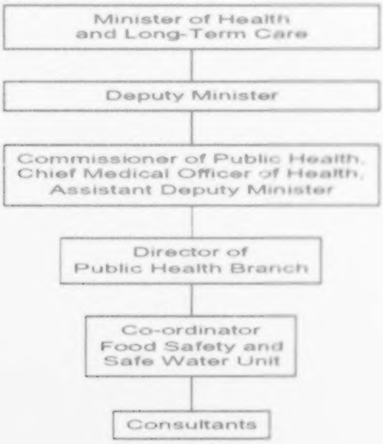
[39] Canadian Food Inspection System, Food Retail and Food Services Regulation and Code, available from http://www.cfis.agr.ca/english/regcode/frfsrc/frfsc_idx_e.shtml [accessed 26 May 2004] were approved by the Canadian Food Inspection System Implementation Group on April 12, 1999, but has since been amended. See http://www.cfis.agr.ca/english/regcode/frfsrc-amendmts/frfsc01_e.shtml [accessed 26 May 2004].

9.5.1 Public Health Branch of the MOHLTC

The MOHLTC is responsible for administering the health care system and providing services to the public, including community and public health and health promotion and disease prevention.

In the Public Health Branch of the MOHLTC, there is a Food Safety and Safe Water Unit which is operated by a coordinator and less than a handful of consultants. I was surprised at the small number of staff involved in the food safety program at the MOHLTC.

The structure of the MOHLTC as it related to the Food Safety and Safe Water Unit is as follows:


Minister of Health and Long-Term Care
Deputy Minister
Commissioner of Public Health, Chief Medical Officer of Health, Assistant Deputy Minister
Director of Public Health Branch
Co-ordinator Food Safety and Safe Water Unit
Consultants

The provincial auditor raised concerns relating to the delivery of public health by the MOHLTC in the 1997 and 2003 annual reports and made the following suggestions:[40]

1997 Auditor's Report	**2003 Auditor's Report**
The MOHLTC should determine whether the Boards of Health had fully implemented food safety training and HACCP protocols.	The MOHLTC had not conducted regular assessments of the health units in the past five years (despite the 2002 Walkerton Inquiry report recommending such assessments).
The MOHLTC should assess whether the food safety inspection protocols had been implemented by the Boards of Health and whether they had been effective.	None of the 33 reporting health units had conducted all of the mandatory food premises inspections and some had not reported at all to the MOHLTC.
The MOHLTC should put further efforts into determining whether the funding for mandatory programs was allocated equitably across the province.	The MOHLTC had not analyzed whether the public was receiving different levels of public health service in different areas of the province.

From my perspective, it is apparent that the Food Safety and Safe Water Unit is understaffed and notwithstanding the dedication of the staff, has insufficient capacity to provide effective oversight and leadership of health units.

9.5.2 Boards of Health

Boards of Health provide public health inspection of all food premises to ensure compliance with the *Food Premises* regulation under the *HPPA* and in accordance with the Mandatory Programs.

The Boards of Health have fourteen program standards that they are required to meet under the Mandatory Programs:

- chronic diseases and injuries (chronic disease prevention, early detection of cancer, injury prevention including substance abuse prevention),
- family health (sexual health, reproductive health, child health),

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[40] 1997 and 2003 *Annual Reports of the Office of the Provincial Auditor of Ontario*, ss 3.10 and 3.09 respectively.

- infectious diseases (control of infectious diseases, *food safety*, infection control, rabies control, safe water, sexually transmitted diseases, tuberculosis control, vaccine preventable diseases).

The MOHLTC asks each of the Boards of Health in Ontario to complete and return a mandatory program indicator questionnaire which contains a section on food safety programs and a food safety program audit report each year. The reports are not always received or if received, not always in a timely manner. There is little capacity in the Food Safety and Safe Water Unit to analyze the data and no effective enforcement steps have been taken against Boards of Health who fail to report or comply with the Mandatory Programs.[41]

The chart below is a summary of the analysis of the food safety program reports received by the MOHLTC from Boards of Health from 1998 to 2003 regarding the number of food premises inspections completed:[42]

Year	No of Health Units	No of Health Unit Responses	High Risk HACCP inspections		High Risk 3 inspections		Medium Risk 2 inspections		Low Risk 1 inspection	
			= 40%	= 80%	= 40%	= 80%	= 40%	= 80%	= 40%	= 80%
2003	37	37	20	11	9	10	11	8	5	8
2002	37	37	ND	ND	14	7	9	6	7	5
2001	42	42	ND	ND	18	3	11	4	8	6
2000	42	42	ND	ND	21	3	16	1	7	3
1999	42	42	ND	ND	24	4	13	3	10	5
1998	42	42	ND	ND	34	1	23	1	14	1

Note: ND means no data analysis on this category in that year.

It is clear that most of the Boards of Health are not meeting the Mandatory Program requirements for inspections of food premises and for the completion of HACCP audits. This is particularly disturbing as the number of inspections required was reduced within the last twenty years from twelve to three per year for high risk food premises.

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[41] For example, budgets of Boards of Health are approved and funds provided no matter the completion rate of food premises inspections.

[42] The table shows the percentage of compliance with the Mandatory Programs number of inspections for the type of food premises (i.e. high, medium or low risk). For example, = 80% means that the health unit had a compliance rate of 80% or greater in completing the mandatory number of inspections of food premises.

In order to obtain a better view of how the food safety standards of the Mandatory Programs are being interpreted and implemented in health units across the province, I requested information from each Board of Health as comprehensive, up-to-date data and auditing information was not available through the MOHLTC. Twenty-nine of the thirty-seven Boards of Health responded to my request and provided extremely useful information which has been used in this Report.

The responses evidence a substantial variation in the nature and delivery of food safety programs and services at Boards of Health across Ontario. As noted earlier, the per capita expenditure on public health by each of the Boards of Health also varies across the province.

The populations serviced by each individual Board of Health range from 73,000 to 2.5 million. The number of food premises requiring inspections in the health units varies from approximately 218 to over 16,500 and the number of inspections from 70 to 27,500 each year. The number of full time employees devoted to public health food premises inspections at each Board of Health ranges from the equivalent of 1¼ to 80 public health inspectors. The number of complaints received each year with respect to food premises at the health units varies from zero to over 3,500. The portion of the budgets of Boards of Health spent on the food safety program ranges from 3.6% to 10%.

Many of the responding Boards of Health advised that additional public health inspectors are required in order for them to provide the Mandatory Programs but also indicated they have been unable to obtain necessary funding. The municipal funding for Boards of Health comes from municipal taxes. Municipalities have many demands on their funds and cutbacks have impacted Boards of Health. However, without additional funding, it is clear that Boards of Health will continue to be unable to fulfill their statutory duty to provide the Mandatory Programs. This problem is exacerbated as inspectors and resources are being diverted from food safety and other Mandatory Programs to new initiatives, emergency reassignments, and to accommodate the growing demand for other types of inspections[43].

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[43] The West Nile virus, smoking by-law enforcement and water safety have been of new or increased concern in the past four years. Inspections and investigations of complaints with

The seasonal basis of many food premises presents further challenges to implementing the Mandatory Programs.

9.5.3 Public Health Renewal

There are serious public health issues in Ontario that require urgent government action. These issues have been identified in the Naylor Report,[44] the Walker Report,[45] and the Interim SARS Commission Report,[46] among others, which have called for extensive renewal of the public health system with recommendations for achieving that objective.

The mandate of this Review was not focussed on these issues to the same extent, however, I did identify many of the same concerns that have been so carefully considered by others and wish to add my support to their comments and recommendations.

From my examination and the previous work done regarding public health renewal, I would emphasize the following:

- food safety must be among the first priorities of Ontario's public health system with the MOHLTC and Boards of Health taking a strong and primary role to prevent harm to the health of the Ontario public.
- emergency planning and preparedness, including communication strategies and coordination with other government agencies and industry are required.
- the provincial government must commit the necessary resources and leadership for effective public health protection against foodborne illness including the provision of resources, direction and leadership

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respect to personal services (ex. tattoo, body piercing, and electrolysis) have recently increased. Public health inspectors have also been reassigned in the last three years to respond to pressing issues, such as with SARS.

[44] The Report of the Advisory Group on SARS and Public Health chaired by Dr. Naylor, *Learning from SARS – Renewal of Public Health in Canada*, Health Canada, 2003.

[45] Ontario, *The SARS Commission Interim Report: SARS and Public Health in Ontario* (15 April 2004), principles 3,5, and 20; Ontario, *For the Public's Health: A Plan of Action, Final Report of the Ontario Expert Panel on SARS and Infectious Disease Control* (April 2004), [also known as the "Walker Panel" or "Walker Report"], recommendations 82, 83, and 84.

[46] *Ibid.*

to the Boards of Health to ensure consistent and effective delivery of food safety programs across the province.

- the public health goals and objectives as they pertain to food safety for the Province of Ontario need to be clearly articulated and the performance of the food safety system measured by the provincial government.

I recommend that additional staff and resources be provided for the Food Safety and Safe Water Unit at the Public Health Branch of the Ministry of Health and Long-Term Care so that it can provide timely and effective leadership and direction to the Boards of Health.

The MOHLTC should provide appropriate policy direction and up-to-date resource materials to Boards of Health and coordinate the use of resources by Boards of Health in order to reduce inefficiencies and duplication of efforts and to ensure that everyone across Ontario receives the same high standards of public health food safety programs.

I recommend that the Ministry of Health and Long-Term Care take all necessary steps to improve compliance by the Boards of Health with the Mandatory Health Programs and Services Guidelines in respect of food safety standards.

The MOHLTC should conduct a review of its Mandatory Programs food safety standards in consultation with Boards of Health and other stakeholders and correct any identified deficiencies. The review should specifically address the number of annual inspections. In order to improve compliance with the Mandatory Programs, the MOHLTC may need to provide 100% funding for mandatory food safety programs, tie funding to compliance, or investigate other monitoring and enforcement tools.

I recommend that the provincial government provide adequate resources to the Boards of Health to hire sufficient numbers of public health inspectors and support staff to fulfill the requirements of the food safety program of the Mandatory Health Programs and Services Guidelines.

I recommend that the Ministry of Health and Long-Term Care conduct annual audits to assess compliance of Boards of Health with the food safety standards of the Mandatory Health Programs and Services Guidelines. The results of the annual audits should be made public and all necessary steps should be taken to ensure full compliance by all Boards of Health.

I recommend that the Ministry of Health and Long-Term Care deliver an annual public report that sets out its objectives and evaluations for food safety standards, the reduction of foodborne illness and the performance of Boards of Health, including their compliance with Mandatory Health Programs and Services Guidelines.

Funding of public health and in particular the activities of the Boards of Health is critical to the success of a public health food safety program. As set out earlier in this report, foodborne illness remains a significant problem in Ontario. Compelling arguments can be made that the province should provide 100% funding for all mandatory programs and services to ensure their consistent delivery to all people in Ontario. A Board of Health should not be thwarted in providing mandatory health programs and services because local municipalities refuse to contribute. As identified in the Walker Report and others, there needs to be a new cost sharing agreement which will provide stable funding to the public health system in Ontario.

I recommend that the provincial government address the deficiencies in the current funding system to ensure Boards of Health have sufficient funding to provide the mandatory food safety programs and services.

9.5.4 Food Premises Inspection Results

A compliance and consumer confidence tool used by some Boards of Health is the posting of food premises inspection results. Some Boards of Health only provide the results of inspections to the public upon request, but others post the results on their websites or post them on a pass/fail or colour coded basis at the premises.

Some food service stakeholders oppose mandatory posting of inspections on the grounds that it sets up a confrontational relationship which can inhibit cooperation. They also suggest that the meaning of some ratings is poorly understood and can be misinterpreted by consumers. Opposition to the posting of inspection results without a full explanation has prompted some heath units to provide full explanations.[47] In my view, this is a responsible practice that should be adopted whenever inspection results are posted.

The MOHLTC, in consultation with the Boards of Health, should investigate whether the posting or availability of inspection results to the public is an effective means to improve compliance with food safety standards in the *Food Premises* regulation and to improve consumer confidence. If the investigation indicates it is effective, then the MOHLTC should design a standardized system as part of the Mandatory Programs.

9.5.5 Evaluation of Food Safety Programs

It is difficult to measure the effectiveness of inspection and other food safety initiatives at each stage of the farm to fork continuum due to the complex interaction of factors that can affect the number of foodborne illnesses contracted and the number which are reported. In addition, the results of testing food are not always helpful as testing for certain pathogens is not practicable and for others, it is not possible.

Judging from preliminary work done in Ontario, one of the best methods of assessment for food premises may be the number of critical infractions per establishment. However, this method will only be reliable if the inspections are conducted in a standardized manner, there is a consistent definition of critical infractions, and there is a comparable record of critical infractions to permit comparison.[48] Unfortunately, not all Boards of Health in Ontario use the standardized inspection report forms developed and distributed by

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[47] Canadian Restaurant and Foodservices Association, *When Simple Isn't Better: Mandatory Posting of Restaurant Inspections* , available from http://www.crfa.ca/foodsafety/foodsafety_policyandregs_mandatoryposting.htm [accessed 3 March 2004]. This concern may have some validity as the evaluation report of the Toronto Public Health Inspection Disclosure system commented that there was a perception that the public did not fully understand the conditional pass notices (yellow) and believed them to be similar to fail notices (red) in terms of risk, which may cause a negative impact on restaurants. *Food Premises Inspection and Disclosure System Evaluation Report*, Toronto Public Health Healthy Environments Services, December 17, 2002. Currently, the website of the Toronto Public Health Inspection Disclosure system explains the meaning of the green/yellow/red system and provides further details of inspection results.

[48] Ontario Public Health Research, Education & Development Program, *Benchmarking and Public Health: The Results of 3 Pilot Projects* (Revised November 1999).

MOHLTC[49] and not all Boards of Health are recording and defining critical infractions in the same manner.

I recommend that the public health inspectors at Boards of Health be required to utilize standard inspection reports for food safety inspections of food premises to ensure that critical infractions are consistently recorded and that data is collected and shared with the Ministry of Health and Long-Term Care.

The MOHLTC should use such data to evaluate the effectiveness of the food safety standards of the Mandatory Programs on an ongoing basis.

9.6 Food Safety Investigations, Outbreaks and Responses

Notwithstanding the strength of the system of food safety in Ontario, there will still be a need, from time to time, to determine whether some meat or meat product has caused foodborne illness. If a number of persons from different households report a foodborne illness which may have a common genesis, the occurrence will likely be labelled a foodborne illness outbreak. It is a complicated process to determine whether there is a single or related source causing multiple foodborne illnesses, since it is often impossible to obtain a sample of the suspect meat or meat product that was consumed. It is also difficult to test for some foodborne illnesses because those stricken usually associate the illness with the last item they ate even though some foodborne illnesses incubate for a number of days before symptoms appear.

In circumstances where there appears to be a common cause of a number of foodborne illnesses, steps must be taken to prevent others from contracting the illness. Responses will vary depending on the extent of the distribution of the suspected product. One possible response is a public recall which the MOHLTC, medical officers of health and the federal authorities have the jurisdiction to do.[50]

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[49] MOHLTC, *Food Premises Inspection Report – Items Critical to Food Safety and Food Premises Inspection Report – Establishments Sanitation, Design and Maintenance Items* (99/09).

[50] The authority for food recalls in the federal government is shared amongst the Minister of Agriculture and Agri-Food Canada, Health Canada and the CFIA. Legislative authority for food

In our society, where there is substantial travel by individuals in and out of Ontario, a prompt response to a potential foodborne outbreak or food safety risk is essential to prevent the spread of illness. The longer a response takes, the more likely other people will contract the illness. In light of the overlapping jurisdictions, it is important that the various government agencies involved respond quickly and in a coordinated fashion.

9.6.1 Roles and Responsibilities

Although there are no agreements between the MOHLTC and Health Canada, Agriculture and Agri-Food Canada or CFIA regarding food recalls, a memorandum of understanding regarding food safety investigations and recall roles, responsibilities, protocols, notification and information disclosure is presently being negotiated. It is very important that this agreement be completed and implemented as soon as possible to ensure that there is a clear understanding and coordination, on an ongoing basis, of the roles and responsibilities of all parties involved in food recalls and food hazard and foodborne illness investigations.

The investigation and response cannot be effective if all agencies with a role in the issue are not notified and given essential information. The draft memorandum of understanding referred to above provides for the formation of a committee for each outbreak or significant investigation, with members on the committee from each involved agency, called the Ontario Outbreak Investigation Coordination Committee. The committee is designed to ensure notification and provision of ongoing information to all involved.

There is also an agreement between OMAF and the MOHLTC addressing communication about food safety risks.[51] This agreement requires that any "food safety concerns" which come to the attention of one ministry be brought to the attention of the other. A "food safety concern" is defined as follows:

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recalls is found in the *HPPA, supra* note 1, s. 13(4) and the *Canadian Food Inspection Agency Act*, S.C. 1997, c. 6, s. 19.

[51] The *Memorandum of Understanding between the OMAFRA and the OMH (Ministry of Health) Respecting Inspection of Meat in Provincially Licensed Meat Plants, Free Standing Meat Processing Plants and Food Premises* sets out the areas of responsibility as between OMAF and MOHLTC and the communication between the ministries regarding food safety risks. It was signed in 1994 and has not been amended.

> *... a situation where there is a reasonable probability that the use of, or exposure to, a food product will cause serious adverse health consequences or may cause temporary adverse consequences where the probability of a serious adverse health consequence is low.*

In addition to the agreement, provincial legislation also requires notification. A medical officer of health is required to notify any Ontario ministry with primary responsibility in the matter when a complaint is made to a Board of Health that a health hazard relating to environmental health exists in the jurisdiction.[52] A "health hazard" is broadly defined and includes a substance, thing, or any condition of a premises that has, or is likely to have, an adverse effect on the health of any person.

There is currently no legislative requirement for OMAF to notify the MOHLTC or other ministry with respect to any food safety issue. The *Food Safety and Quality Act, 2001* will, once proclaimed, require the director to notify the local medical officer of health or Chief Medical Officer of Health of any significant food safety risk.[53] This is a necessary and important provision in food safety legislation.

The agreement and legislation are lacking in that they do not specify what information must be shared with the other ministries. Obviously, any ministry or agency with a role to play in an emergency situation must be given the information needed for them to fulfill their responsibilities. Consideration should, therefore, be given to identifying and specifying the information that must accompany such notifications.

9.6.2 Food Recalls

Most food recalls in Ontario (including meat) are undertaken by the CFIA. The Office of Food Safety Recall (OFSR) of the CFIA decides whether a recall will be conducted or other response taken in respect of a potential food safety risk or foodborne illness outbreak after it reviews the data from the investigations conducted by the CFIA or public health inspectors. There are three classes of recalls that can be issued, depending on the risk involved. Only one class involves a public announcement.[54] Once the class is determined, most recalls are carried out voluntarily with the cooperation of the producers and retailers although the Minister of Agriculture and Agri-Food Canada can issue a mandatory recall order, if necessary.[55]

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[52] *HPPA, supra* note 1, s. 11.

[53] The director must notify if, in the director's opinion, there is or may be a food safety risk that constitutes a significant risk to public health and safety. "Food safety risk" includes anything that has or may have an adverse effect on the health or safety of a person who consumes a food or agricultural or aquatic commodity that is designated in the regulations. *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20, s. 13.

The responsibilities of federal government agencies are clearly defined as amongst them in a federal food emergency response plan. The CFIA is responsible for enforcing mandatory recalls and verifying compliance with a voluntary recall. The OFSR tracks recall trends and provides program recommendations. Health Canada is involved in the investigations of foodborne illness outbreaks occurring in multiple provinces and territories and communicates with the CFIA about any epidemiological links that are found.

The federal government typically leaves the lead role in a foodborne illness outbreak or investigation to the Boards of Health or Public Health Branch of the MOHLTC unless the outbreak spreads beyond the borders of the local Board of Health or province or the local agency requests federal assistance.

The recall power is an important one in preventing or minimizing health risks. However, a recall may be ordered when it is not warranted and cause substantial economic loss to affected businesses. In such circumstances, those who have suffered an unjustifiable loss should have access to compensation. Such a provision would not only redress an unjust result, but would also encourage prompt and full compliance with recalls.

There are no agreements or protocols currently in place with the federal government agencies and the MOHLTC or between Boards of Health.

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[54] A Class I recall involves a Class I health risk which is the potential for serious adverse health consequences which could be fatal. Public announcements are usually issued for Class I recall unless the product is no longer available to the public. A Class II food recall involves temporary adverse health consequences. A Class III food recall involves a health risk which is very remote and usually arise from violations of food safety legislation or regulation. The public is not normally notified about Class II and III recalls.

[55] On occasion, a recall will be made mandatory by an Order of the Minister of Agriculture and Agri-Food Canada under s. 19, *CFIA Act, supra* note 50. A recent example of such a recall involving meat and meat products from a provincially inspected abattoir was the recall issued in August 2003 in respect of products from Aylmer Meat Packers Inc.

There is a website available to the Boards of Health from across the country on which authorized public health personnel can post updates of foodborne illness investigations and recalls to provide notification and information to other agencies, however, it is not consistently used or accessed. Typically, Boards of Health and the Public Health Branch communicate by email, fax and telephone conference calls during emergencies or significant food recalls or food safety risk investigations. One of the concerns expressed by certain Boards of Health is that, too often, recall information is passed from agency to agency without any direction.

I also heard, during the course of this Review, concerns expressed with respect to the lack of coordination in communication with the public and the media. The Boards of Health are the agencies that the public and media usually contact for information regarding potential food safety risks, however, they are not always sufficiently informed to enable them to respond. It is important that clear communication strategies, responsibilities and roles be agreed to and followed as between the various agencies involved in food recalls, foodborne illness outbreaks and food hazard investigations and that one agency assume responsibility in each incident for all public communication.

Most of the communications between federal agencies, OMAF, MOHLTC, and the Boards of Health are only informal and as such, subject to the availability and cooperation of the personnel dealing with the incidents. The arrangements need to be formalized and specific protocols promulgated.

I adopt the recommendation of the Expert Advisory Panel to this Review and recommend that the provincial government enter into an agreement involving the Ministry of Agriculture and Food, the Ministry of Health and Long-Term Care, the Ministry of the Environment, the Ministry of Agriculture and Agri-Food, Health Canada and the Canadian Food Inspection Agency regarding foodborne illness and food safety risk investigations and responses. I recommend that the agreement assign one government agency to take the lead on all communication to the media and public in foodborne illness and food safety risk investigations and responses. I recommend that the

agreement provide for the establishment of a committee to coordinate each foodborne illness and food safety risk investigation and response which requires a multi-agency response with membership on the committee from each involved agency and the affected Board(s) of Health to maximize cooperation, efficiency and the effectiveness of the investigation and response.

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Chapter 10 - Consumers

10.1 Introduction

The consumer is the "fork" in the farm to fork continuum. Because harmful food pathogens can enter the food chain due to behaviour in the home, most public policy initiatives on food safety, from Boards of Health to the World Health Organization,[1] emphasize that efforts aimed at consumers are integral to improving food safety. As much as 50% of foodborne illnesses may be linked to the home setting, so it is important that consumers understand their role in food safety.[2]

The demographics of consumer behaviour are changing food production practices all along the food continuum. Consumers are eating fewer home-cooked meals and more prepared and fast foods. This creates new food safety issues for consumers, as safe storage and cooking of previously cooked and prepared foods differs from raw foods.

There are risks associated with any food and the objective of any government public education intervention should be to enhance consumer knowledge about these risks. Consumer confidence in meat safety is key. To this end, it is important to help consumers understand how the food safety system works, what efforts are being taken by government, producers and industry to reduce risks in food and what prudent and sensible steps they can take to address potential risks.

Government at all levels, as well as producers, commodity groups and industry have an important role to play in delivering public education on food safety.

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[1] WHO, *Foodborne Disease: A Focus for Health Education*, 2000, available from http://www.who.int./foodsafety/publications [accessed 20 May 2004]. Chapter 2 lists ten reasons why health education in food safety is both necessary and effective, and argues that a comprehensive and well-funded regulatory system alone cannot prevent foodborne disease.

[2] See earlier discussion on foodborne diseases. In Ontario, it is estimated that 50% of sporadic cases between 1997 and 2001 may be linked to a home setting. M.B. Lee & D. Middleton, *Enteric Illness in Ontario, Canada from 1997-2001*. Journal of Food Protection. (Vol.66, No.6, 2003), p.953-961.

10.2 Consumer Food Safety Risk Analysis

10.2.1 Who is Most at Risk?

The members of our population most vulnerable to unsafe food are: young children, older adults, pregnant women and people with compromised immune systems.[3]

10.2.2 Harmful Microorganisms on Meat in the Home

An increasing number of on-line resources available to consumers and educators provide information on the mode of transmission of specific harmful microorganisms, frequently implicated foods and risk reduction measures.[4] Most outbreaks of foodborne illness result from the transfer of harmful microorganisms from meat to humans.

Table 1 lists a number of microorganisms commonly implicated in foodborne illness and the percentage of cases associated with the home.

Table 1: Enteric pathogens, by risk settings associated, Ontario, 1997 to 2001 – Home[5]

Campylobacter	Salmonella	VTEC	Yersina	Shigella	Hep. A	Listeria	Total
51%	50.4%	66.4%	67.3%	19.2%	27.8%	70.7%	50.2%

The potential sources of harmful foodborne pathogens related to meat in the home are plentiful and include: improper handwashing; improper sanitation of food surfaces; improper handling and storage; thawing at room temperature; leaving food at room temperature for longer than two hours;

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[3] Healthy adults have usually developed some immunity to pathogens, but small children have not and they are particularly susceptible to serious health results from diarrhea, dehydration and kidney disease. Pregnant women are particularly susceptible to *Listeria*, which can cause miscarriage. For example, pregnant women are twenty times more likely and people with AIDS are almost 300 times more likely to contract *Listeriosis* than the average population. Thomas and Powell, 2003 *Listeria Fact Sheet*, available from http://www.who.int/foodsafety/publications/general/en/fos_brochure1999.pdf [accessed 20 May 2004].

[4] For example, see the 46 page appendix on 31 foodborne diseases in *Foodborne Diseases: A Focus for Health Education*, *supra* note 1; and USDA, CFSAN, *Foodborne Pathogenic Microorganisms and Natural Toxins (Bad Bug Book)*, available from http://www.cfsan.fda.gov/~mow/intro.html [accessed 20 May 2004].

[5] *Supra* note 2. This is excerpted from a table comparing the outbreaks in different locations, such as restaurants and homes. See also Organization for Economic Cooperation and Development, *The Incidence and Costs of Foodborne Disease*, Doc. No. AGR/CA/APM (2002) 28/FINAL (10 Sept 2003) for a table on foodborne disease outbreaks in OECD countries by place where food was eaten or prepared.

and not observing "best before dates" or "expiration dates" at the time of purchase or consumption.

Each of these sources can either contribute to adding new pathogens to the food, or permit conditions that promote growth of any microorganisms already in the meat to unsafe levels. Food handling behaviours have been implicated to varying degrees in their contribution to foodborne illness. For example, improper cooling (eg. large batches of hot food in containers that do not chill quickly enough) is implicated in 56% of cases, an infected person handling food in 24% of cases and obtaining food from unsafe sources in 6% of cases.[6]

10.2.3 Reducing the Risks of Foodborne Illness in the Home

Consumers can generally reduce the risk of foodborne illness by eliminating the sources of harmful pathogens through their own behaviours in food handling and preparation. Some risk-reducing behaviours are specific to the food, the source, method of storage, cooking, preservatives and the specific bacteria. Specific risk-reducing behaviours for consumers include effectively killing bacteria by cooking to specified temperatures. For example, targeted risk reduction campaigns have focused on cooking ground beef to an internal temperature of 160°F (71°C) which is known to kill any *E. coli* O157:H7 that may be present in the meat.[7]

Consumers have control over many of these risk behaviours. However, there are generally no consumer risk-reducing behaviours to reduce chemical or physical contaminants, residues or some biological contaminants such as BSE, if they are present in meat. Therefore, risk-reducing strategies to keep these contaminants out of meat must be engaged elsewhere in the food chain, with information on such efforts being made available, so that consumers can decide for themselves whether they are satisfied with safety measures being taken.

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[6] See table entitled, *Ten Most Important Contributing Factors in Foodborne Disease*, in Windsor-Essex Health Unit, Food Handler Training Materials, *Food Safety - It's in Your Hands*.

[7] See for example U.S. FDA/CFSCAN, *The Safe Food Chart – Meat, Poultry and Seafood* (17-September 2001), available from http://www.cfscan.fda.gov/~dms/fttmeat.html [accessed 27 March 2004].

10.2.4 Reducing the Risk of Unsafe Food Sources to Consumers

Consumers generally obtain meat and meat products from either food service or retail outlets. A smaller number of consumers obtain meat directly from farmers and a very small number of consumers produce their own. Consumers assume the meat is safe no matter where it is purchased.

I am confident that most meat sold in Ontario has been properly slaughtered and inspected. Nevertheless, during this Review I heard from a number of sources that illegal slaughter and the sale of uninspected meat continues to occur in Ontario. It is important to eliminate this illegal sale as the sale and consumption of uninspected meat is a food safety concern. As I discuss later, there is a need for increased enforcement of existing laws to address this illegal sale of meat. The problem can also be addressed, at least in part, by making consumers aware that they should avoid uninspected meat and that it is illegal for consumers to purchase live animals to slaughter themselves.

All vendors of meat are subject to the *Health Protection and Promotion Act*[8] and its *Food Premises* regulation. Consumers should be made aware of the requirements for meat to be inspected so they can, if they choose, ask for evidence that the vendor is in compliance. Inspected meat is stamped and waybills and receipts document the licensed abattoirs from which meat has been obtained.

10.3 Consumer Awareness and Education

Consumer food safety initiatives generally try to increase consumer awareness, knowledge or education about the unintentional contributions of consumers to foodborne illness and how consumers can reduce the risks in the home. Very specific education campaigns can be designed to reduce the risk of a specific harmful pathogen. Although many consumer education programs are "top-down" processes, consumer organizations caution against a paternalistic approach to consumers that treats them as being passive, uninformed receivers of information and recommend a two-way dialogue that also responds to what consumers want to receive information about.[9]

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[8] *Health Protection and Promotion Act*, R.S.O. 1990, c.H.7.

10.3.1 Consumer Awareness of Foodborne Illness

Unfortunately, studies show that most consumers are generally unaware of the extent to which their own behaviour is a contributing factor to food safety or about measures needed to prevent foodborne illness in the home.[10] Most consumers feel their knowledge and use of safe handling practices at home is high, but studies disclose gaps in that knowledge.[11]

10.3.2 Sources of Food Safety Information for Consumers

There are a number of government and industry initiatives focused on increasing consumer awareness about meat safety. A vast array of educational resources, including websites, hotlines, slide presentations, factsheets, brochures and more, target consumers, educators and health professionals who work with consumers.[12]

A U.S. study cites the most common sources of food safety information as:[13] family/friends; food labels/packaging; newspapers; magazines; television (news and news programs); cookbooks and cooking shows. The study suggested that the internet, government sources (eg. hotlines) and doctors and health professionals have not been a major source of information for consumers. A later U.S. study noted that even though consumers do not actively seek safety information, they heed food safety recommendations in the media. Consumers also rely on food labels for food safety information, and regularly check expiration dates on food labels.[14]

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[9] E. Groth III, *Assuring Food Quality and Safety: Back to the Basics – Quality Control Through the Food Chain The Role of Consumers*, Consumers Union of USA, Inc. (1999), available from http://www.fao.org/docrep/meeting/X2602E.htm [accessed 19 January 2004].

[10] For example, a *1998 Safe Food Handling Survey* by Environics for the CFIA observed that only 16% of consumers think food safety problems are most likely to occur at home. See studies cited in L. Medeiros et al., *Evaluation of Food Safety Education for Consumers*, Journal of Nutrition Education 2001;33: p.27-34.

[11] *Ibid*. One study that observed consumer food handling behaviour using audit forms commonly used in restaurant settings, found that 96% of 106 households audited had at least one critical violation (one that could potentially lead to a foodborne illness). See also FSIS, PR/HACCP Rule (2002) Evaluation Report, *infra* note 14 – In 2001, 93% of consumers reported confidence that meat and poultry they prepare at home is safe, but only 6% of consumers always or often use a thermometer cooking hamburgers, 12% use one for chicken and 26% safely store leftovers. These numbers are higher than they were 5 years previous.

[12] See CPFSE materials and links, available from www.canfightbac.org. [accessed 29 March 2004]; See also AMA, ANA, CDC, FSIS, et al. *Diagnosis and Management of Foodborne Illness: A Primer for Physicians and other Health Professionals*(Feb 2004), available from http://www.ama-assn.org/ama1/pub/upload/mm/36/2004_food_introclin.pdf [accessed 11 May 2004]. It also includes information for health officials to provide to consumers.

[13] FSIS (USDA), *PR/HACCP Rule Evaluation Report – Focus Group Study on Food Safety Messages and Delivery Mechanisms* (2000) available from www.fsis.usda.gov/OA/research/fsmessages.pdf [accessed 29 March 2004].

Consumers may not be aware that in the context of a food emergency, such as in the case of a power outage or a food recall, government sources have usually provided food safety information to the media. The issue of risk communication is discussed elsewhere in the Report.

10.3.3 Key Food Safety Messages

Most food safety awareness and education programs based on epidemiological data have focused on one or more of the five following behaviours:[15] practicing proper personal hygiene; cooking foods adequately; avoiding cross-contamination; keeping foods at safe temperatures; and avoiding food from unsafe sources.

Many consumer awareness and education programs being delivered currently in Ontario draw on materials developed by the Canadian Partnership for Consumer Food Safety Education (CPFSE) and the U.S. FightBac!®. These programs emphasize the following four basic food handling behaviours:[16]

- cook (cook to proper temperatures)
- clean (wash hands and surfaces often)
- separate (do not cross-contaminate)

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[14] FSIS (USDA), *PR/HACCP Rule Evaluation Report. Changes in Consumer Knowledge, Behaviour, and Confidence since the 1996 PR/HACCP Final Rule.* (2002) USDA, Washington, available from http://www.fsis.usda.gov/OA/research/HACCPimpacts.htm [accessed 29 March 2004].

[15] This list of five key behavioural constructs is recommended in Medeiros et al (2001), *supra* note 10, based on their review of the epidemiological data. U.S. programs such as FightBAC!® www.fightbac.org [accessed 26 May 2004] and others have tended to focus on the first four only. The WHO poster on *Five keys to safer foods*, stresses the use of safe water and raw materials as their fifth point, such as foods processed for safety, e.g. pasteurized milk. http://www.who.int/foodsafety/publications/generalbrochure_1999/en/print.html [accessed 29 March 2004].

[16] *Supra* note 12. A number of the materials are Canadian versions of the FightBAC!® campaign materials developed by the U.S. Partnership for Consumer Food Safety Education.

- chill (refrigerate promptly)

While the old adage still applies, "when in doubt, throw it out" consumers are also being asked to take science-based preventative measures which recognize that most foodborne illnesses are caused by microorganisms that may be at harmful levels, but cannot be detected by sight or smell.

The incorrect belief of many consumers that you can tell bad meat by smell or sight alone needs to be addressed.[17] To be effective, food safety education messages must not only provide factual scientific information, but must also help consumers set aside and modify incorrect beliefs and behaviours.

10.3.4 Targeted Food Safety Consumer Education

Many food safety education initiatives have been launched in the past five years, and in this short time, the priorities for food safety education have been evolving. The European Commission noted two such changes in their 2000-2001 campaign:

- information is not enough – another step is required and that is education; and
- a budget can only be put to effective use if it is focused on specific target groups instead of being dispersed across the population as a whole.[18]

The recent trend in public policy to target resources to those most in need of public services, is also true in food safety education. For example, most food safety education efforts by Boards of Health in Ontario target people working in the food service industry, particularly in businesses deemed to be high and medium risk.[19]

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[17] Health communication researchers have found that people often reject a message about food handling because they subscribe to lay theories – beliefs or understandings held by persons without expert knowledge of a field, that run counter to scientific understanding. Maladaptive lay theories include that one can tell by sight, smell, or taste when food is contaminated. CAST, 2004, *Intervention Strategies for the Microbiological Safety of Foods of Animal Origin*, Issue Paper 25, January 2004. Council for Agricultural Science and Technology.

[18] European Commission, *Consumer Information and Education Activities, The 2000-2001 Food Safety Education Campaign*, available from http://europa.eu.int/comm/consumers/cons_info/event35_en.pdf [accessed 29 March 2004]

The trend is also to focus on one theme or target group for a given year and cluster food safety education messages around that theme or group for a period of time.[20] A number of food safety programs dealing with meat and poultry are delivered on a seasonal basis.[21]

10.3.5 Effectiveness and Evaluation of Consumer Food Safety Education Programs

To be effective, food safety education must both increase consumers' awareness about risks and motivate them to change their food handling and consumption behaviours. Ultimately, consumers have to actually change their behaviours and habits for an education program to be truly effective.

As with the demand for science-based inspection approaches, there is a demand for science-based education programs – programs that have been developed on the basis of solid educational and behaviour-modification theory, tested for validity and reliability and evaluated for effectiveness. There is also a demand for program objectives and benchmarks to evaluate programs.[22] A lot of research has been done in this area that ought to be taken into consideration in developing practical education strategies and programs.[23]

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[19] Boards of Health in Ontario have developed food handler training courses. See Chapter 9 for further discussion. FSIS has a specific campaign targeting thermometer use in cooking meat and poultry, available from www.fsis.usda.gov/thermy [accessed 29 March 2004].

[20] For example, the 2001/2002 theme for the CPFSE was food safety for older adults. Materials were sent to Meals on Wheels, magazines such as *50+* and health units. A theme for 2002/2003 CPFSE is food safety for young adults moving out on their own. CPFSE, *2001/2002 Annual Report*., available from http://www.canfightbac.org/english/about/ar/ar01/ar01e.pdf [accessed 26 May 2004].

[21] Campaigns targeting food consumption practices around meat have been undertaken in BBQ season and holiday seasons (e.g. *Your burger's done at 71° C*, a fridge magnet produced by Health Canada; turkey - *Infra*, CIPHI note 42).

[22] Medeiros et al (2001), *supra* note 10.

[23] See discussion of social cognitive theory, Health Belief Model, transtheoretical model and others in Medeiros et al (2001), *supra* note 10.

Most importantly, educational programs must be evaluated.[24] In evaluating programs, it is not always enough to ask people if they have done a specific behaviour in the last month or whether they are still doing it, as they will often minimize the actual incidence of undesirable behaviours.[25] Educational materials also need to be evaluated prior to their use.[26]

As noted elsewhere in the Report, disease surveillance information is crucial to establishing priorities and objectives, as well as measuring the effectiveness of meat safety initiatives across the food continuum. If the recommendations in Chapter 3 to improve the ability to collect foodborne illness data in Ontario are implemented, this will greatly assist proper evaluation of consumer educational efforts.

10.4 Partnerships in Consumer Education

Collaborative efforts and partnerships are important to the delivery of multi-media food safety education campaigns. These partnerships recognize that a single "champion" to promote awareness of the interdependence of meat and health is unlikely to achieve heightened consumer awareness and successful meat safety outcomes.[27] A particular message is reinforced if it comes from multiple sources. In addition, it is more efficient to produce one set of educational materials both for cost and for clear, consistent messages to be communicated to consumers.

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[24] There are numerous references on consumer education websites to the fact that an evaluation is intended, but few appear to have been completed. Medeiros et al (2001), *supra* note 10 evaluated 12 food safety programs in the U.S. and found that most of the materials had not been tested for reliability and validity, nor was a comprehensive evaluation built into program delivery. Many of the programs had not been developed specifically around the key food behaviour constructs that would allow evaluation of behavioural change.

[25] For example, in one study, 87% reported they wash their hands before food preparation, but only 45% actually did so when observed. Cited in FSIS (2002) PR/HACCP Report, *supra* note 14. Medeiros et al (2001), *supra* note 10, recommend framing evaluation questions to measure behaviour based on a zero tolerance model and the five key food safety constructs and suggest sample questions.

[26] A U.S. study following up on a number of key education components in their FightBac!® program found that consumers surveyed were generally unaware of government food safety interventions or agencies, were unaware of terms such as HACCP, cross-contamination, pathogens, the two-hour rule, irradiation or even the term "farm to table" and did not understand the "danger-zone" thermometer graphic. Other food safety messages had more positive impacts on consumers. *Supra* FSIS (2000) PR/HACCP, note 13.

[27] National Food Processors Association, News Release, *More Collaborative Efforts Needed to Increase Consumer Understanding of Nutrition and Food Safety, Says NFPA* (15 April 2004).

The CPFSE is an example of a national partnership which brings together governments at all levels, producers, processors, distributors, nutritionists and others in the food industry. Both the Ministry of Agriculture and Food (OMAF) and the Ministry of Health and Long-Term Care (MOHLTC) are members, as well as a number of local health units in Ontario.[28] The CPFSE's Grade 4-7 Learning Program is an example of how this partnership works.[29] CFIA created a distribution plan for school boards, teachers' associations, youth associations and health professionals; Health Canada shipped program and partnership materials; Ontario Agri-Food Education helped to revise the Teacher's Guide and develop a new poster; and local health units encouraged schools to use the program.

The *Chill Out* pamphlet, a brochure on proper cooking, storing and chilling information for meat, is an example involving the meat industry partners, Health Canada and other partners in the CPFSE. The meat industry helped develop and pay for printing costs, the Canadian Turkey Marketing Agency put it on their website and other partners helped distribute it across the country.

A recent paper analyzing intervention strategies for food safety suggests that new strategies for educating consumers must be used, possibly including mass media campaigns that capture people's attention and encourage behavioural change.[30] As noted earlier, most consumers get information on food safety issues through the media, either through news coverage of foodborne illness outbreaks or controversies, public service announcements regarding food recalls and food interest stories such as seasonal tips on food preparation, or advertisements.

There are numerous advantages that I can see to all sectors of the food continuum working together on consumer food safety education, particularly as it may help to capture the interest of the public media. In light of the discussion on evaluation above, as partnerships continue to develop strategic educational campaigns directed to consumers, it will be helpful to collect information on their uptake in the community and evaluate their impact on consumer behaviour.

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[28] 8 of 37 Boards of Health are listed as being members in the CPFSE 2001-2002 Annual Report.

[29] See CPFSE 2000/2001 and 2001/2002 annual reports for more discussion on these programs, *supra* note 12.

[30] CAST Media release, January 28, 2004, *What Consumers, Regulators, and Researchers Want to Know About Current and Future Intervention Strategies*, available from http://www.cast-science.org/cast/pub/interventionstrategies_nr.htm [accessed 27 March 2004].

10.5 Labelling and Traceability

Food labelling is an increasingly complex area that is primarily governed by federal legislation. All hazardous foods, including meat and poultry, must be labelled to include the name and address of the manufacturer and the date on which the food was manufactured or an expiry date.[31]

The listing of known allergens in the list of ingredients is perhaps the most important labelling issue from a consumer health perspective and an issue involved in many alerts and food recalls. Labelling is also being used by industry to communicate quality assurance, country of origin, organic certification, and animal diet information among other things. Safe use labelling has to compete for the small space allocated on labels for consumer information.

10.5.1 Safe Handling Label

Government-mandated labelling can be a useful tool for achieving social objectives because of the potential power of information on labels to influence consumer behaviours. The U.S. has required safe handling instructions on meat labelling since 1994. The instructions not only alert consumers to the health risks due to possible bacterial contamination of meat, they also describe how to avoid these risks.[32]

---

[31] Currently in Canada, labelling is mandatory if there is a health or safety issue with a food, which might be mitigated through labelling under the *Food and Drugs Act*. The *Consumer Packaging and Labelling Act* prohibits fraudulent claims. The *Meat Inspection Act (Canada)* and regulations specify further labelling requirements for meat. There are safe storage labeling requirements for certain cooked meats under section B.22.026 of the *Food and Drug Regulations*. CFIA has recently been developing labelling requirements for organic and GMO based food, with the Canadian General Standards Board, available from http://www.hc-sc.gc.ca/english/protection/biotech/regulation.htm [accessed 19 May 2004].

[32] *Mandatory Safe Handling Statements on Labeling of Raw Meat and Poultry Products*. Final Rule, 59 Fed. Reg. 14528-14540. (1994) (Codified at 9 C.F.R. § 317.2, 317.5, 381.125, and 381.134.

The USDA studied the issue of food labelling and determined that information on product use that enhances safety could benefit consumers and that government mandated labelling for this purpose was effective and appropriate. It suggested that labelled warnings are particularly valuable to consumers if they include instruction on how to avoid or minimize the risk, such as in safe handling instructions on meat.[33]

Safe handling labels occasionally appear in Ontario, voluntarily applied by the meat processor or the grocery chain. For example, one label reads as follows:

> *Handling instructions: for your protection, ensure that raw meat products are handled and cooked properly. Keep this product refrigerated until ready to prepare. Keep raw meat separate from other foods. Wash work surfaces, utensils and hands with soap and water after touching raw meat.*
>
> *Cook thoroughly until an internal temperature of 160°f (72°c) has been reached. The center of the meat should not be pink and the juices should run clear. Cooking times will vary. Refrigerate leftovers immediately or discard.*[34]

This simple yet informative label helps promote the safety of meat once it is in consumers' hands.[35]

I recommend that the provincial government, in conjunction with the meat industry and other levels of government, encourage the use of safe handling labels on all meat products for sale to consumers in Ontario.

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[33] E. Golan et al, *Economics of Food Labelling*, Agriculture Economic Report No. (AER793), 2001, Economic Research Service, USDA.

[34] Lean ground beef. A PC® Product. Prepared for Sunfresh Limited, Toronto Canada M4T 2S8. © Copyright 1998. Note the actual size of English text was 1" x 2" and the text was capitals.

[35] Labels indicating the proper cooking temperature and food handling and storage tips are helpful to consumers. The label above reinforces the four key safety messages listed earlier. It is red in colour and does not include negative warnings – all recommendations for food safety labels. Consumer surveys also suggest making it a peel-off sticker that consumers can keep, increasing the size of the font and including a thermometer graphic on the label to encourage people to use one. FSIS (2000), *supra* note 13.

The information should include the temperature to which the product should be heated to kill any foodborne pathogens and other important food handling, storage and preparation information.

10.6 Provincial Government Role in Education on Food Safety

10.6.1 OMAF

OMAF provides base funding to Ontario Agri-Food Education Inc. (OAFE) for its programs and services.[36] OAFE was created in 1991 with the mission of building awareness and understanding of the importance of the agriculture and food system. Its members include many producer groups. OAFE also develops curriculum-based resources and provides professional development services for educators across the province and lists 72 resources on their website, some of which include food safety.[37] There does not appear to be any evaluation of the extent to which this information has been used or its effectiveness in changing behaviours and this should be rectified.

Although other agricultural organizations have also produced consumer food safety information,[38] there appears to be a gap related to consumer information regarding on-farm food safety and safety issues for consumers in dealing with farm-gate and farmer's market sales. Given OAFE's mandate for public information regarding agriculture, it is an appropriate organization to develop consumer educational materials about on-farm food safety programs, as well as materials that reinforce the importance of the consumer ensuring that any meat the consumer purchases has been properly inspected and stored.

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[36] OAFE is a registered charity incorporated under the *Agricultural and Horticultural Organizations Act*, R.S.O. 1990, c.A-9. OMAF provided $400,000 to OAFE in 2003. See http://www.oafe.org/section/view/index.php?section=8&page=15&session [accessed 29 March 2004].

[37] *Ibid.*, OAFE resources are linked to curriculum in science, family studies and health for Grades 4-7. Labelling literacy is linked to social studies, science, health, language and visual arts for Grades 4-6. An Intermediate School Pak, including "Food Safety Can be Fun" is linked to Grades 7-10 and a Junior School Pak with FightBAC!® materials is linked to Grades 4-6. They also have an "Eat Right" program that meets the Grades 9-10 curriculum in family studies and health and focuses on healthy eating, food safety, labelling, fast foods and recent food research. "Complex Issues in Agriculture" includes food safety and is linked to Grades 11 and 12 Science, Geography and Family Studies.

[38] Ontario Farm Animal Council produces various resources for students and teachers, such as a *Factsheet on Medication and Food Safety*, as well as factsheets on animal care and handling, available from http://www.ofac.org/teacher.html [accessed 14 April 2004].

I recommend that the Ministry of Agriculture and Food provide funding for the development of educational resources for delivery to the public relating to the food safety system, including the risks of purchasing uninspected meat.

10.6.2 MOHLTC and Boards of Health

The MOHLTC has mandatory guidelines requiring Boards of Health in Ontario to deliver public health food safety education to their communities, including food handler training programs.

The Mandatory Health Programs and Services Guidelines[39] prescribe that:

> *…each board of health shall provide food safety information annually to:*
>
> *(a) the community, by displaying readily available printed educational material to visitors to board of health offices and by providing the information through the media;*
>
> *(b) to all non-profit community groups such as school nourishment programs, food banks, and community meal programs; and*
>
> *(c) to teachers responsible for teaching food-related subjects to students in grades 7 and 8 and /or other teachers as deemed appropriate. Board of Health staff will assist if requested.*

From the information provided by Boards of Health to this Review, discussed in the Chapter on Meat Retail and Distribution, there are gaps in the delivery of the general public food safety education components required by the MOHLTC and uneven efforts across the province amongst the Boards of Health.

Eight Boards of Health are partners in the CPFSE and deliver the *FightBac!®* program materials in their communities, as well as other materials developed by the partnership, such as the *Chill Out* brochure on meat safety. But the materials do not appear to be delivered as part of any organized programs, other than the food handler training program.

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[39] December 1997, MOHLTC.

Most Boards of Health participate in the *Eat Smart* program[40] and several have developed various methods to give consumers more information about local food premises inspections.[41] Some Boards of Health have developed policies and brochures highlighting food safety for farmers' markets, for wildlife hunters on the safe hanging and storage of wild game carcasses, for in-house catering, for volunteer/church suppers, for special events, for donations to food banks, and for other specific locations or special occasions where meat and poultry may be prepared or consumed in the community.

Although health programs on food safety directed to consumers have been mandatory since before 1997, Board of Health annual reports and other information provided to me showed little or no plans for delivery of food safety programs for consumers. As noted above, there are educational materials available through the CPFSE and elsewhere, so Board of Heath resources should be concentrated on the development and delivery of food safety programs. The public health inspectors are well qualified to deliver public education. Their own organization, Canadian Institute of Public Health Inspectors has produced public education materials for the media and their members.[42] Health units commented to the Review that competing demands for West Nile virus, SARS, water quality testing and other public health initiatives have impeded their ability to provide food safety programs. There needs to be a coherent and discrete program in which to deliver food safety information to the public, which is protected within the health unit framework and not eroded by other public health programming or priorities.

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[40] Restaurants wishing to be on the Eat Smart website referral list and in community brochures, are assessed by the public health inspectors for nutrition, food safety and non-smoking seating. Food safety criteria require 12 months excellent inspection reports and one full time kitchen employee certified in safe food handling. Patrons can go online and obtain a listing of restaurants in their health unit district area. There are 878 restaurants on the website for the province, available from http://www.eatsmart.web.net/english/ [accessed 29 March 2004].

[41] For example, The City of Toronto's Food Premises Inspection & Disclosure System – DineSafe, available from www.toronto.ca/fooddisclosure [accessed 21 May 2004], See Chapter 9.

[42] CIPHI, Media Release, *Food Safety Facts for Cooking Christmas Turkey* (19 December 2003).

The strongest public health education initiative on food safety appears to be the food handler training in each health unit, but it is usually limited to the retail sector. I encourage its promotion to all segments of the community.

Only one Board of Health advised that they offer their food handler certification course within a local high school course. A public health inspector delivers the 6-hour program over the course of a week and students are given the opportunity to write an exam to achieve certification. Given the number of young people whose first jobs are in the retail and foodservice industry, this would seem to be an excellent opportunity to provide important job and life skills.

I recommend that the Ministry of Health and Long Term Care develop, in collaboration with the Boards of Health and the Ministry of Agriculture and Food, uniform consumer food safety education programs for delivery throughout Ontario.

These education programs should have clearly defined objectives that focus on risk-reducing behaviour in the home for those people who are most vulnerable to foodborne illness, those foodborne illnesses with the largest economic impact, and those behaviours with the highest correlation in contributing to or limiting foodborne illness.

I recommend that the provincial government evaluate the effectiveness of consumer food safety education materials and programs.

10.6.3 Ministry of Education

There was a time when home economics was taught as part of the required curriculum in Ontario and health studies courses would have provided an opportunity to teach students basic food safety skills. Although there are materials that have been developed by the CPFSE on food safety for elementary and high school level students, and there are numerous food safety educational resources around the world for use by teachers and schools,[43] food safety is not formally part of the curriculum in Ontario.

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[43] For example, WHO, *Food, Environment and Health: A Guide for Primary School Teachers* and other education resources, *supra* note 1; USDA, FSIS and others have education

The CPFSE had a formal launch of their recently developed Grades 4-7 Learning Program in an Ottawa school. One Board of Health noted that it obtained a commitment from two school boards to incorporate the Learning Programs for Grades K-3 and 4-7 into their curriculum.[44] A number of other Boards of Health noted they had forwarded teacher resource information on food safety to local schools, but there is no information on whether the teachers made use of the materials. It is well known that children can learn safe behaviours if taught in school, and bring them home, initiating behavioural change in their family. More effort is needed to engage students on food safety issues.

Many young people are involved in food preparation at home and in part-time jobs. Basic food safety education should be delivered as a core component at some point to every student, either as part of health, life skills or any job skills related course.

In the European Union, there is more formal involvement of the education sector in food safety education partnerships than in Ontario.[45] It is my view that the Ministry of Education should be encouraged to collaborate in the establishment of food safety education initiatives and explore opportunities for integrating such education into the curriculum.

I recommend that the curriculum for all elementary and high school students developed by the Ministry of Education include instruction on food safety risks and proper food safety behaviours.

School boards should work in coordination with MOHLTC and Boards of Health to provide opportunities for food handler certification in every high school, either as a formal component of the curriculum, or an optional program facilitated by the high school on school premises.

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resources, newsletters, electronic information networks, children's pages with curriculum, and other materials, available from http://www.cfsan.fda.gov/~dms/fttmeat.html, http://www.fsis.usda.gov/OA/pubs/consumerpubs.htm, http://www.foodsafety.gov/~fsg/fsgkids.html [accessed 27 March 2004].

[44] See CPFSE 2001/2002 Annual Report, *supra* note 12.

[45] In the EU, government public education ministries and teachers' organizations are often members of national food safety partnerships. *Supra* note 18.

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Chapter 11 - Compliance and Enforcement

11.1 Introduction

Ontario's meat regulatory system is designed to protect public health and the safety of animals. To varying degrees, every stage from on-farm production to retail sale is regulated. An outbreak of foodborne illness can cause enormous social and economic loss including widespread illness, death, the long-term loss of consumer confidence and irreparable damage to an entire industry.

The existing provincial system contains elements designed to prevent wrongful conduct and to identify and promptly respond to instances of non-compliance. Through a patchwork of legislation overseen by multiple ministries and bodies, the province prohibits certain activities unless conducted under the authority of a licence, specifies standards with respect to premises, equipment and business practices, requires independent monitoring of certain operations and establishes a variety of responses to non-compliant conduct. Many instances of non-compliant conduct are isolated, technical and unintentional. Food safety and animal welfare may not have been compromised. In such cases, identification, education and training may provide an easy and permanent solution. Unfortunately, serious breaches of the system do occur and require a fast and firm response. In this chapter, I review Ontario's present compliance and enforcement system and suggest ways it can be improved.

11.2 Current Compliance and Enforcement Issues

11.2.1 On-Farm

Records obtained by the Review show that in recent years prosecutions have been initiated and convictions obtained in respect of a number of non-compliant on-farm activities including:

- slaughtering animals for the purpose of harvesting and selling meat or meat products without obtaining a licence to do so and without inspection contrary to the *Meat Inspection Act* (*MIA*).[1] Those activities are commonly described as illegal slaughter;

- slaughtering animals in a way that subjected them to avoidable pain and suffering contrary to regulations under the *MIA*,[2] the *Ontario Society for the Prevention of Cruelty to Animals Act* (*OSPCA Act*)[3] and potentially the *Criminal Code* of Canada;[4]
- failing to make adequate provision for the shelter or care of animals contrary to the *Criminal Code*;[5]
- failing to dispose of the carcasses of dead animals in a proper manner within 48 hours of death as required by the *Dead Animal Disposal Act* (*DADA*)[6] and its regulation;[7] and
- transporting non-ambulatory animals without a veterinary certificate contrary to the regulation under the *Livestock and Livestock Products Act* (*LLPA*).[8]

On occasion, investigations and charges relate to multiple activities. In 2003, for example, the Ministry of Agriculture and Food (OMAF) received a complaint of an objectionable odour emanating from a hog operation. An investigation was initiated by OMAF and, for reasons outlined later in this chapter, the Ministry of Natural Resources (MNR) joined the investigation.

Investigators observed large numbers of dead animals that had not been dealt with either appropriately or in a timely fashion. They also observed a large number of abandoned animals that were malnourished and dying. Legislation overseen by OMAF and enforced on its behalf by MNR deals with dead animal disposal but not with the ongoing care of a producer's livestock. Consequently those provincial ministries requested the assistance of the Ontario Society for the Prevention of Cruelty to Animals (OSPCA) to care for, treat and either rehabilitate or, where necessary, euthanize ailing livestock.[9]

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[1] *Meat Inspection Act*, R.S.O. 1990, c. M.5, s. 3, O. Reg. 632/92, s. 2 permits producers to slaughter farm animals on the producer's own premises for consumption by the producer and the producer's immediate family.

[2] O. Reg. 632/92, s. 64.

[3] *Ontario Society for the Prevention of Cruelty to Animals Act*, R.S.O. 1990, c. O.36, s. 13 does not create an offence but does permit an OSPCA inspector to order the owner or custodian of an animal to take such action as the inspector believes is necessary to relieve the animal of its distress.

[4] *Criminal Code*, R.S.C. 1985, c. C-46, ss. 444 and 446.

[5] *Ibid.*, s. 446.

[6] *Dead Animal Disposal Act*, R.S.O. 1990, c. D.3, s. 3.

[7] R.R.O. 1990, Reg. 263, s. 6.

[8] *Livestock and Livestock Products Act*, R.S.O. 1990, c. L.20 and Transporting Non-ambulatory Animals, O. Reg. 732/94, s. 5.

Similarly, an investigation into the sale of uninspected meat uncovered illegal slaughter activities resulting in charges and prosecutions under both animal welfare and food safety laws.[10]

11.2.2 During Transport

As indicated previously,[11] the federal government regulates the loading and transportation of farm animals. Prosecution bulletins of the Canadian Food Inspection Agency (CFIA) evidence convictions of animal transporters who failed to provide appropriate bedding, protection from the elements, rest, food or water or unloaded animals using inappropriate methods including whips or electric prods.[12]

At the provincial level, inappropriate handling of animals during unloading has resulted in a regulatory review of an operator's licence.[13] Many non-ambulatory animals are transported short distances to provincially licensed abattoirs. Records provided to the Review demonstrate that in 2003 alone, 69 non-ambulatory animals arrived at abattoirs without required veterinary certificates or arrived with a veterinary certificate that did not match the animal it accompanied. While no charges appear to have been laid, a number of animals were condemned and any economic value that otherwise might have been obtained from their meat lost.[14]

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[9] Ontario Society for the Prevention of Cruelty to Animals, NewsRelease, *Pig Farm Investigation reveals thousands of animals dead and dying* (14 October 2003) available from www.ospca.on.ca/libr_pr_2003_Oct14b.html [accessed 2 March 2004].

[10] Ontario Society for the Prevention of Cruelty to Animals, NewsRelease, *Whitchurch-Stouffville man pleads guilty to illegal slaughter* (31 March 2004) available from www.ospca.on.ca/libr_pr_2003_Aug01.html [accessed 28 May 2004].

[11] See Chapter 5,.

[12] CFIA prosecution bulletins are found at www.inspection.gc.ca/english/corpaffr/projud. For a representative prosecution bulletin, see "Maritime livestock carrier fined $2,500 for breach of *Health of Animals* regulations" (14 November 2002) www.inspection.gc.ca/english/corpaffr/parojud/2002/20021114e.shtml [accessed 16 March 2004].

[13] The Director's decision of 13 May 2002 with respect to Aylmer Meat Packers Inc. dealt with, among other things, allegations that livestock had been dragged from trucks contrary to O. Reg. 632/92, s. 28.1.

11.2.3 At Livestock Community Sales Facilities

While the Review has not received any evidence of the laying of charges or regulatory proceedings against livestock community sales facilities related to either animal welfare or food safety issues, records provided by OMAF establish that compliance and enforcement issues arise from time to time. Audits exposed the need for repairs to prevent animal injury. They identified failure to segregate animal species, to isolate unhealthy animals, to retain non-ambulatory animals on trucks pending veterinary inspection, to inspect every arriving animal and to forward to OMAF lay inspection reports as statutorily required. On occasion, the same deficiencies were noted year after year.

I have also heard, on an anecdotal basis, that livestock is, on occasion, purchased at public auction by persons who are neither producers nor licensed abattoir operators for the purpose of slaughter, processing and sale of meat without a licence and without inspection.

11.2.4 At Abattoirs and Connected Processing and Retail Facilities

A large number of documents have been provided to the Review concerning the activities of provincially licensed abattoirs including excerpts from inspectors' logs, audit reports, corrective action plans, compliance and advisory reports, non-ambulatory animal incident reports and regulatory hearing decisions. They evidence a consistently high standard of performance by most provincial operators and the pride with which their operations are conducted. To the extent issues in respect of premises, equipment or business practices are uncovered, the vast majority of Ontario's operators take corrective action quickly.

On occasion, less conscientious operators were identified. If efforts to resolve deficiencies were unsuccessful despite the efforts of meat inspectors, area managers, the field manager or veterinarian services provided by regional veterinarians or veterinary scientists, licensing hearings were held. Almost thirty regulatory hearing decisions for the period 2001-2003 were delivered to the Review by OMAF. While the issues raised were varied, eleven involved deficiencies in required standards with respect to premises, equipment or business practices. Nine involved slaughter activities which were illegal because they were undertaken without a provincial meat inspector present. Five involved activities classified as obstruction because they either prevented an inspector from performing statutory duties or through confrontation, impeded the inspector's ability to do so. Three more involved allegations that unsafe product was offered for sale. The others related to animal welfare issues. OMAF's experience with one abattoir in 2003 is particularly illustrative of the range of food safety and animal welfare issues that have arisen at this stage of the farm to fork continuum.

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[14] OMAF provided copies of non-ambulatory incident reports to the Review.

A private citizen complained to the OSPCA that an abattoir operator was not treating animals humanely. After a brief, initial investigation, the OSPCA brought the complaint to OMAF's attention. OMAF initially attempted to address the concerns expressed though its compliance and advisory unit. However, a visit by compliance and advisory officers for the purpose of reviewing animal welfare issues ended in confrontation, a temporary suspension of the operator's licence and, less than 24 hours later, a regulatory hearing.

Animal welfare concerns at that location were not new. While poorly documented, compliance and advisory officers had visited the plant before. Earlier concerns had been expressed. After the initial visit and over a period of months leading up to the hearing, additional disturbing observations were recorded by several OMAF meat inspectors and by an independent auditor. A letter of concern was written to the operator by an OMAF program manager. Compliance and advisory officers re-attended with a veterinary scientist. The area manager visited the abattoir as did the regional veterinarian. All made disturbing observations which suggested that inappropriate practices had been ongoing for some time.

Despite its existence and apparent relevance, evidence in respect of animal welfare issues was not led at the regulatory hearing. Also, the fact that the hearing was held so soon after the incident limited the ability of the parties to marshal evidence addressing that issue.

After listening to testimony from a number of witnesses, the Director of OMAF's Food Inspection Branch, who presently presides over licensing hearings, found that the operator's conduct was "the culmination of a series of incidents where inappropriate language and threats were level[l]ed against" the compliance and advisory officers and concluded "[j]ust as ministry staff are expected to be professional and respectful at all times in the conduct of their duties, regulated clients must respond in kind."

A three month licence suspension was imposed and then immediately stayed on condition that the operator sign and adhere to an undertaking to avoid contact with ministry staff, meet corrective action plan dates for remedying audit deficiencies and fulfill all statutory animal welfare requirements on an on-going basis.[15]

The OSPCA was not content with the result. It continued its own investigation, obtained and executed a search warrant, obtained further details of animal abuse from OMAF employees in respect of incidents that predated the regulatory hearing, and laid a number of animal welfare charges. Ultimately, a guilty plea was entered in respect of a number of them and fines totalling $3,250 were imposed.[16]

The operator was before the Director again less than a year later. Meat products had been detained due to adverse water results. The operator had, without authorization, removed the OMAF tags and shipped the products before the results of tests on the products were known, allegedly believing there was a "low risk" of contamination. The operator stated that the product was not to be unloaded at its final destination until the results were communicated. While product was under detention and being tested, the regional veterinarian allowed slaughtering activities to continue despite the area manager's refusal to do so.

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[15] Drawn from the October 22, 2002 decision of the Director in *Re Den Dekker Meats* 2001.

[16] Ontario Society for the Prevention of Cruelty to Animals, News Release, *Slaughterhouse fined after pleading guilty to animal welfare charges under the Meat Inspection Act* (1 August 2003) available from www.ospca.on.ca/libr_pr_2003_Aug01.html [accessed 2 March 2004].

The Director held that the licensee was "very fortunate that subsequent water test results were negative, that no one became ill and there was no recall" and concluded that "breaking detention is a serious compliance issue." The Director imposed a one day licence suspension and warned that a more strict penalty "might" be imposed if the conduct was repeated.[17]

11.2.5 At Free Standing Meat Processors

If the processing of meat or meat products is undertaken on premises connected to an abattoir, the processing function is subject to the licensing and inspection systems imposed by the *MIA* and to the standards and requirements it establishes.[18]

However, the *MIA* has no application if the processing of meat is undertaken at premises where slaughtering does not take place. Those locations, commonly known as free standing meat processors (FSMPs), are subject to a different statutory regime.[19]

While operators of FSMPs may commence business without holding a licence, their premises, equipment and business practices are, once again, regulated in a manner designed to protect public health. The sale of uninspected meat, meat or meat products unfit for human consumption or a failure to adhere to statutorily required standards expose the operator to charges and prosecution by provincial authorities.[20]

Certain business practices may expose the FSMP operator to federal sanction. The CFIA has conducted successful prosecutions under the *Food and Drugs Act* as a result of the sale of adulterated meat and re-labelling practices which mislead consumers in respect of such matters as ingredients or freshness.[21] The CFIA has also obtained convictions against FSMPs under other federal statutes as a result of the misuse of federal meat inspection legends on meat products.[22]

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[17] Based on the Director's October 6, 2003 decision in *Re Den Dekker Meats* 2001.

[18] *MIA supra* note 1, s. 3. Standards are outlined in O. Reg. 632/92, ss. 37-47 as amended.

[19] Those premises are presently regulated by the *Health Protection and Promotion Act*, R.S.O. 1990, c. H.7 (*HPPA*) and *Food Premises*, R.R.O. 1990, Reg. 562 (the *Food Premises* regulation).

[20] *HPPA*, *supra* note 19, ss. 17 and 103 and the *Food Premises* regulation, *supra* note 19, ss. 37-31.

[21] CFIA, Prosecution Bulletin, *Jay's Food Market (Can-Na Foods Ltd.) Found Guilty of Selling Horse Meat Labelled as Beef* (16 August 2002) available from

11.2.6 At Retail Locations

Many sell meat to the public without undertaking processing activities themselves. In an effort to ensure that food safety concerns are addressed, their activities are subject to requirements which are similar to those that apply to FSMPs concerning premises, equipment and business practices. Prosecutions have been conducted in respect of a similar range of matters to those involving FSMPs. For example, a number of retail stores were successfully prosecuted by provincial authorities for selling uninspected meat[23] and by federal authorities for mislabelling meat products, misrepresenting ingredients and original packaging dates and failing to store product at required temperatures.[24]

11.3 Current Compliance and Enforcement Services and Recommended Changes

As I have already outlined, meat regulation is a task undertaken by both the federal and provincial governments. While the CFIA has been designated as a single agency to administer and enforce the federal statutory scheme, Ontario has not adopted that approach. At some stage of the continuum, one or more of OMAF, the MNR, the Ministry of Health and Long-Term Care (MOHLTC) and Ontario's 37 Boards of Health have responsibility for addressing breaches of statutory provisions relating to meat. On occasion,

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www.inspection.gc.ca/english/corpaffr/parojud/2002/20020816e.html [accessed 16 March 2004].

[22] CFIA, Prosecution Bulletin, *$21,000 Fine for Illegal Use of a Federal Meat Inspection Legend* (5 February 2004) available fromwww.inspection.gc.ca/english/corpaffr/parojud/2004/20040205be.shtml [accessed 16 March 2004].

[23] R. Cribb, *Meat Shops Often Cited*, Toronto Star (6 October 2003).

[24] CFIA, Prosecution Bulletin, *$20,000 Fine For Adultering Meat with Sulphurous Acid* (26 March 2003) available from www.inspection.gc.ca/english/corpaffr/parojud/2003/20030327e.shtml [accessed 16 March 2004]; *Westfair Foods Fined $100,000 for Re-Labelling and Altering Meat Product Dates* 23 October 2003) available from www.inspection.gc.ca/english/corpaffr/parojud/2003/20031031e.shtml [accessed 16 March 2004] and *Santa Maria Foods Corporation Violates the Meat Inspection Act and Canada Agricultural Products Act* (26 July 2001) available from www.inspection.gc.ca/english/corpaffr/parojud/2001/200110726e.shtml [accessed 16 March 2004].

additional services have been provided by municipal, regional or provincial police forces and by the OSPCA. I will deal with each of the principal participants.

11.3.1 Ministry of Agriculture and Food

11.3.1.1 Statutory Authority

OMAF is the Ministry responsible for legislation relating to on-farm slaughter, the transportation of non-ambulatory animals, the licensing and regulation of abattoirs and connected processing and retail facilities. If the *Food Safety and Quality Act, 2001* (*FSQA*)[25] is proclaimed, OMAF will also be responsible for overseeing the activities of FSMPs.

The principal statutes administered by OMAF are the *MIA*, the *DADA*, the *Livestock Community Sales Act* (*LCSA*)[26] and the *LLPA*. Breaches of any of their provisions or regulations may result in enforcement proceedings. If the contravention involves a licensed operator, OMAF may initiate a regulatory process in the form of a licensing hearing which could result in the non-renewal, suspension or revocation of the operator's licence.[27] Alternatively, OMAF may take steps resulting in the operator being charged and prosecuted under the statute alleged to have been breached.[28] If the breach involves an unlicensed person, prosecution under the applicable statute is the only enforcement alternative available.

11.3.1.2 An Overview of OMAF's Role

OMAF has the largest part of the oversight role for meat safety. Under the leadership of the Director and through OMAF's Food Inspection Branch monitoring, compliance and enforcement activities are undertaken. The operations of abattoirs and any connected processing and retail activity are monitored by meat inspectors under the immediate supervision of area managers who report, in turn, to the field manager. OMAF's regional veterinarians, veterinary scientists and veterinarians in private practice appointed by OMAF provide additional assistance, guidance, advice and direction in addressing issues relating to the health of animals and meat harvested from them. Annual audits are conducted by third party auditors retained by OMAF to review and assess each licensed operator's premises, equipment and business practices. Concerns are categorized by seriousness, a letter grade is assigned to indicate the extent to which the operation meets expected standards and a corrective action plan is developed to ensure that deficiencies are remedied.

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[25] *Food Safety and Quality Act, 2001*, S.O. 2001, c. 20.

[26] *Livestock Community Sales Act*, R.S.O. 1990, c. L.22.

[27] *MIA*, *supra* note 1, ss. 3-5; *DADA*, *supra* note 6, ss. 3-5; and *LCSA*, *supra* note 26, ss. 4-6.

[28] *MIA*, *supra* note 1, s. 16; *DADA*, *supra* note 6, s. 17; and *LCSA*, *supra* note 26, s. 18.

The activities of livestock community sales yards are monitored by employees of the operators appointed by OMAF as lay inspectors under the periodic supervision of OMAF's weigh and trim inspector and a regional veterinarian. Once again, veterinarians in private practice are appointed by OMAF to address animal health and welfare concerns that arise during day-to-day operations. Operators are audited annually to facilitate identification and rectification of deficiencies.

Activities connected to dead animal collection, transportation and disposal are monitored by a dead animal disposal advisor with assistance, where required, from others including regional veterinarians. The dead animal disposal advisor assesses the operations of all licensed dead animal collectors, receivers and brokers. The federal government conducts audits of rendering operations.

On most occasions, a failure by licensed operators to comply with required standards is identified by those responsible for monitoring operations or by auditors. Observations of non-compliant conduct may be recorded in daily logs or communicated to a more senior person within OMAF if animals or carcasses are detained, an order to temporarily suspend slaughter activities is given or inspection services withdrawn.

A minor contravention identified and satisfactorily addressed during regular monitoring activities will not likely involve any other personnel dedicated to other functions. Where, however, the violation is significant, recurrent or unresolved, OMAF may involve its compliance and advisory personnel or refer the matter to enforcement. In 2001, OMAF created two compliance and advisory officer positions to provide important intermediate ground between monitoring and enforcement. They report to the Enforcement Advisory and Liaison Officer (EALO). This small group comprises the compliance and advisory group (CAG). The CAG provides support to frontline personnel by periodically attending licensed plants in an effort to resolve outstanding compliance issues. In addition, compliance and advisory officers are, on occasion, able to deal with breaches of the statutory scheme by unlicensed persons through education and advisory visits.

Food safety or animal welfare concerns may require a more serious response. If animals or carcasses are detained, inspection services withdrawn or the entitlement of the operator to hold a licence is questioned, a regulatory hearing will be convened before the Director.[29]

If OMAF decides that the conduct warrants a charge and formal prosecution, a different approach to enforcement is adopted. Until 2000, OMAF had its own investigation unit consisting of a chief investigator and a small staff of investigators. Since 2000, delivery of the enforcement function has been contractually transferred from OMAF to the MNR. As a result of the arrangement, MNR has established, at OMAF's cost, a small agricultural investigations unit. All requests for investigation and enforcement by MNR are initiated by the EALO. Aside from monitoring, compliance and advisory services and a screening, referral and consultative role, OMAF has contracted its non-regulatory enforcement function to the MNR.

11.3.1.3 Regulatory Responses to Non-Compliance

Under current legislation, livestock community sales operations, abattoirs, deadstock collectors, meat waste disposal operators and livestock dealers must be licensed.[30] Those involved in farming activities generally and in the transportation of live farm animals do not require a licence from OMAF.[31] The licensing regimes outlined in the *MIA*, *DADA*, *LCSA*, and *LLPA* are similar and require the Director to issue and renew a licence provided the basic requirements are met and absent good reason to believe that the regulated business will not be or has not been conducted properly.[32]

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[29] O. Reg. 632/92, ss. 85(5), 86(4) and 94(2).

[30] Livestock community sales operations must be licensed under the *LCSA*; abattoirs under the *MIA*; deadstock collectors and meat waste disposal operators under the *DADA* and livestock and livestock product dealers under the *LLPA*.

[31] Some farms must register with Agricorp under the *Farm Registration and Farm Organization Funding Act*, 1993, S.O. 1993, c. 21.

The provincial government has recognized that meat inspectors may observe substandard premises, equipment or business practices that jeopardize meat safety and which require an immediate response to prevent or to contain the risk of harm to human health. For that reason, regulations under the *MIA* permit inspectors to detain and tag unhealthy animals and suspicious product,[33] to withdraw inspection services and inspection stamps[34] and to issue directions to the operator to cease using equipment or a portion of the plant's premises.[35] While any dispute over the exercise of an inspector's powers may be resolved informally, the appropriateness of any of these actions may be reviewed by the Director at a hearing.[36]

Each of the *MIA*, *DADA*, *LCSA* and *LLPA* allow the Director to suspend an operator's licence on an interim or provisional basis if the Director is of the opinion that there is an immediate need for the protection of the health or safety of any person, animal or the public.[37] If the power is exercised, the Director is required to hold a hearing to determine whether a further suspension or revocation of the licence is warranted. Even absent grounds supporting a provisional suspension, a history of non-compliance, an unsatisfactory audit result, a failure to adhere to a corrective action plan, or other reasons, may result in the Director deciding that the operator's licence should not be renewed or should be suspended or revoked. In those instances, each statute requires that a hearing be conducted after the operator has been given a "reasonable opportunity to show or to achieve compliance."[38]

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[32] *MIA*, *supra* note 1, ss. 4-5; *DADA*, *supra* note 6, ss. 6-7; *LCSA*, *supra* note 26, ss. 4-5; and *LLPA*, *supra* note 8, ss. 3, 5.

[33] O. Reg. 632/92, ss. 85 and 87.

[34] *Ibid.*, s. 94.

[35] *Ibid.*, s. 86.

[36] *Ibid.*, ss. 85(5), 86(3), 87(9) and 94(2).

[37] *MIA*, *supra* note 1, s. 5 (2); *DADA*, *supra* note 6, s. 7(2); *LCSA*, *supra* note 26, s. 5(2); and *LLPA*, *supra* note 8, s. 5(2).

[38] *MIA*, *supra* note 1, s. 6 (1); *DADA*, *supra* note 6, s. 8(1); *LCSA*, *supra* note 26, s. 6(1); and *LLPA*, *supra* note 8, s. 6(1).

Basic rules designed to ensure that the hearing process is fair are set out by statute.[39] The Director is given discretion in respect of the renewal, suspension or revocation of licences and the authority, either at the Director's own instance or at the request of the licensee, to vary or rescind an earlier decision.[40] If the decision of the Director is adverse to the licensee, an appeal may be taken to the Agriculture, Food and Rural Affairs Tribunal (Tribunal). Subject to statutory procedural rules, the Tribunal may confirm or alter the Director's decision.[41] To date, no licensing decision of the Director under the *MIA*, *DADA* or *LCSA* has been appealed.[42] Consequently, the further statutory right of appeal from the Tribunal to the Divisional Court has not been exercised.[43]

Between 1998 and 2003, the Director presided over 77 hearings involving licensing issues, decisions of inspectors to detain product and the withdrawal of inspection services.[44] A wide range of dispositions were ordered, including 16 licence suspensions, 3 licence revocations, 3 refusals to grant an application for a licence, meat and meat product was ordered destroyed, warnings were given and the pool of inspection hours provided without charge by the provincial government to some non-compliant operators was reduced.

In conducting hearings, the Director performs a quasi-judicial role. The process is an adversarial one with OMAF, represented by the EALO, often seeking to impose or continue actions which have significant economic consequences on the operator.

Under the *FSQA*, the existing role of the Director would continue[45] and be enlarged to include the power, and in some instances, the obligation to impose an administrative monetary penalty.[46] Their amount may be significant and non-payment by a licensee may place a licence in jeopardy.[47] A right of hearing before the Director and appeal to the Tribunal in respect of such penalties would exist under the *FSQA*.[48]

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[39] See, for example, *MIA*, *supra* note 1, s. 6 (2); *DADA*, *supra* note 6, s. 8(2); *LCSA*, *supra* note 26, s. 6(2); and *LLPA*, *supra* note 8, s. 6(2) and the *Statutory Powers Procedure Act*, R.S.O. 1990, c. S.22, s. 3.

[40] *MIA*, *supra* note 1, s. 7; *DADA*, *supra* note 6, s. 9; *LCSA*, *supra* note 26, s. 7; and *LLPA*, *supra* note 8, s. 7.

[41] *MIA*, *supra* note 1, s. 8; *DADA*, *supra* note 6, s. 10; *LCSA*, *supra* note 26, s. 8; and *LLPA*, *supra* note 8, s. 8.

[42] As advised by OMAF.

[43] *MIA*, *supra* note 1, s. 10; *DADA*, *supra* note 6, s. 12; *LCSA*, *supra* note 26, s. 10; and *LLPA*, *supra* note 8, s. 10.

[44] Listings were provided by OMAF along with copies of most decisions.

[45] *FSQA*, *supra* note 25, ss. 5, 6, 7, 8 and 9.

11.3.1.4 Non-Regulatory Responses to Non-Compliance

The *MIA*, *DADA*, *LCSA* and *LLPA* make it an offence to contravene their provisions or related regulations.[49] Conviction is punishable by a fine of up to $2,000 for a first and up to $5,000 for a subsequent offence. Under the *MIA* and *DADA*, a term of imprisonment may also be ordered. Prosecution must be initiated within 6 months of the commission of the offence.[50]

If proclaimed, the *FSQA* will broaden the existing offence provisions. Existing legislation only applies to the legal entity engaged in the wrongful conduct. The *FSQA* would extend the reach of the offence provisions to those managing or conducting an operation and those who participated in or allowed the wrongful conduct to occur.[51] Maximum monetary penalties have been substantially increased to $25,000 for a first and $50,000 for a subsequent offence for individuals and $100,000 for a first and $200,000 for a subsequent offence for corporations.[52] In determining the amount of a monetary penalty, a conviction under related legislation will be treated as if it had occurred under the *FSQA*.[53] Non-monetary penalties would also be increased.[54] The limitation period would be extended to two years.[55]

The *FSQA* would permit additional sanctions. Any monetary benefit derived from the wrongful conduct would be at risk of forfeiture to the

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[46] *Ibid.*, s. 41. The *FSQA* leaves to regulation many details concerning administrative penalties.

[47] *Ibid.*, ss. 41(4) and 41(13).

[48] *Ibid.*, ss. 41(6) and 41(10).

[49] *MIA*, *supra* note 1, s. 16; *DADA*, *supra* note 6, s. 17; *LCSA*, *supra* note 26, s. 18; and *LLPA*, *supra* note 8, s. 17.

[50] *Provincial Offences Act*, R.S.O. 1990, c. P.33, s. 76(1). The six month period commences on the date the offence was or is alleged to have been committed.

[51] *FSQA*, *supra* note 25, s. 44(2).

[52] *FSQA*, *supra* note 25, s. 46(1) and 46(2).

[53] *FSQA*, *supra* note 25, s. 56(3).

[54] *FSQA*, *supra* note 25, s. 46(1).

[55] *FSQA*, *supra* note 25, ss. 41(3) and 45.

Crown[56] and costs incurred in respect of corrective action, food safety prevention or in undertaking investigations leading to successful enforcement action would be recoverable by the Crown.[57]

11.3.1.5 Compliance and Enforcement Policy

Unlike some other provincial ministries,[58] OMAF has not developed a written compliance or enforcement policy which describes the roles and responsibilities of those involved in compliance or enforcement activities or the standard responses which will be occasioned by non-compliant or illegal behaviour.

OMAF has developed a personal security policy which is intended to provide a safe work environment and protect its staff from physical or verbal abuse.[59] OMAF employees are advised that services, including inspection services, may be withdrawn if physical or verbal abuse is encountered and that offending conduct is to be reported to more senior OMAF officials. On several occasions, licensing hearings have been conducted to address violations of the policy.

OMAF's meat inspector training manual includes a limited description and discussion of some compliance strategies and advises inspectors, investigators, and auditors to consider the public interest when planning and undertaking compliance activities. The manual also advises inspectors that there should be no tolerance of the inhumane treatment of animals at licensed abattoirs.

Contracts entered into between OMAF and MNR envision the two ministries collaborating to "outline and direct where enforcement effort should be expended," consulting "to determine [the] best method for deterrence" when dealing with non-compliant licensed operations and jointly deciding "the enforcement strategies related to licensed/unlicensed facilities/ individuals operating outside of the" meat regulatory system.[60] However, written criteria, guidelines or policies do not exist and no discernible strategy has been identified.

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[56] *FSQA*, *supra* note 25, s. 46(4).

[57] *FSQA*, *supra* note 25, s. 51 although the language utilized is somewhat unclear.

[58] For example, the MNR, the Ministry of the Environment and the Ministry of Labour. Perhaps this is part of the reason a survey conducted by OMAF in the 2002-2003 fiscal year revealed 57% of OMAF's targeted stakeholders had confidence in OMAF enforcement programs.

[59] A copy was provided to the Review by OMAF. It bears policy number 18.08.

Information provided to the Review establishes that OMAF prefers to deal with licensed operators through regulatory processes absent serious food safety concerns. Responses to unlicensed persons have ranged widely and included education and advice, warnings, the detention and destruction of meat or meat products and prosecution. The approach appears to be dictated by the particular facts of each case.

11.3.1.6 Role of the Compliance and Advisory Unit

OMAF supplied the Review with a short summary of each case handled by the CAG along with a sampling of reports prepared by compliance and advisory officers or by the EALO from 2000 until 2003. During that period the CAG addressed 355 complaints most commonly involving allegations of illegal slaughter and the sale of uninspected meat. Compliance and advisory officers made 426 advisory attendances including visits to actual and potential licensees to verify safe and appropriate business practices and delivered 74 presentations to public health inspectors, industry participants and the general public concerning various aspects of Ontario's meat regulatory system. Members of the CAG have broad experience on the monitoring side of the meat industry, having previously been meat inspectors and area managers and are well suited to providing educational and advisory services. However, they have limited, if any, investigative or enforcement training.[61]

All complaints of non-compliant conduct are directed to the EALO. To the extent that a complaint relates to a licensed facility, the EALO, in consultation with the program manager and other OMAF employees, decides whether to initiate a regulatory process which may adversely affect the operator's licence or whether some other response, ranging from advisory services to non-regulatory enforcement, is warranted.[62]

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[60] These phrases have been drawn from the unexecuted copies of the Cooperative Agreement dated February, 2002 and the Service Level Agreement amended June, 2002 between the MNR and OMAF provided the Review. I understand the executed versions are in the same form.

[61] One of the current compliance and advisory officer positions is an interim one occupied by an area manager on an acting basis.

In respect of complaints relating to unlicensed operations, the EALO decides the nature and extent of the involvement of compliance and advisory officers, receives and assesses their reports and recommendations and determines whether OMAF will request MNR to pursue further enforcement action.

In initially receiving, screening and assessing complaints, the CAG is an integral part of a graduated approach to enforcement and a means of dealing with those who have unwittingly, by way of an isolated occurrence and without serious consequence technically breached or failed to adhere to legislative or regulatory requirements. To the extent that compliance and advisory officers are able to readily determine that a complaint is without merit, the CAG ensures that limited investigative resources are not wasted.

11.3.1.7 Delegation of Non-Regulatory Enforcement

In 1999, when OMAF decided to reorganize its non-regulatory enforcement, it turned to the MNR. While the MNR has no statutory obligation in respect of the production, processing or sale of meat derived from farm animals, the MNR does have extensive involvement in the management of Ontario's natural resources including wildlife.[63] The management of those resources involves substantial regulation and the MNR has developed a recognized expertise in enforcement activities.

In February 2000, OMAF and the MNR entered into a Cooperative Agreement which remains in effect. It resulted in the termination of OMAF's investigative unit and to transfer, contractually, much of the delivery of the non-regulatory enforcement function to the MNR. The arrangement is further described in a Service Level Agreement which was originally executed in 2001 and amended in mid-2002.

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[62] This summary is based on the unexecuted copies of the agreements referred to in *supra* note 60.

[63] One of the principal statutes administered by the MNR is the *Fish and Wildlife Conservation Act, 1997*, S.O. 1997, c. 41.

While OMAF's role in enforcement is, by reason of the agreements, substantially reduced, it has not been eliminated in light of OMAF's continued receipt, screening, assessment and direction of complaints.

Once referred, the conduct of an investigation lies with the MNR, subject to its obligation to advise OMAF of their status from time to time. Save with respect to licensed abattoirs, the decision whether to lay charges lies with the MNR. If, however, the investigation involves a licensed abattoir, MNR is contractually obligated to consult with OMAF to determine whether to proceed under the regulatory or non-regulatory enforcement regime.

In 2002, a number of matters referred to the MNR by OMAF were returned to OMAF because the MNR investigators were simply unable to deal with them in a timely fashion due to limited human and financial resources.[64] While, on occasion, compliance and advisory officers have assisted MNR investigators in the performance of their duties, compliance and advisory officers and the EALO have also conducted investigations themselves. Allegations of significant and sophisticated illegal slaughter operations, the sale of uninspected meat and the mislabelling of meat and meat products have been investigated by compliance and advisory officers and by the EALO. These instances appear to be increasingly common.[65]

11.3.1.8 Comments and Recommendations

11.3.1.8.1 Monitoring Activities

OMAF already devotes substantial resources to ensure that the food safety objectives of the meat regulatory system are fulfilled. An intensive inspection service by meat inspectors, supported by veterinarians, area managers, a field manager, external auditors and a Director provides, on its face, a formidable group to monitor and regulate the operations of licensees. Inspections and audits are part of a precautionary approach to food safety and are designed to ensure that unsafe meat does not enter the food chain. Those services are also essential to the early identification and correction of non-compliant conduct. Ensuring that premises, equipment and business practices meet or exceed required standards requires an adequate number of inspectors, sufficient funding, and a well-qualified, properly oriented, continuously trained, and clearly directed inspectorate.

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[64] The decision was communicated to MNR investigators in mid-December 2001.

[65] The statement is based on a review of the summary of Compliance and Advisory Unit cases and selected reports of its members provided by OMAF to the Review.

If proclaimed, the *FSQA* will substantially enlarge the powers of inspectors to act. The *FSQA* will give inspectors the right, without a warrant, to enter premises, to stop and inspect vehicles, to detain, seize and test products, to seize and copy information and records.[66]

Importantly, inspectors would be given the power to issue orders designed to prevent, decrease, control or eliminate food safety risks or to ensure that non-compliant activity does not occur or, if identified after the fact, ends. Many of these additional powers are necessary and appropriate.[67]

Unfortunately, the *FSQA* does not distinguish between the monitoring activities of inspectors and those which are aimed at investigation and enforcement. The *FSQA* includes within its description of inspectors all persons involved in monitoring, compliance and enforcement activities whether they be inspectors on a kill floor, inspectors performing a routine inspection at an FSMP or an MNR agriculture investigator conducting surveillance on an alleged illegal slaughter operation.[68]

The importance of distinguishing between inspection and investigation wherever possible was addressed in Part Two of the *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water* (Walkerton Report). Associate Chief Justice Dennis O'Connor wrote:

> *The concern – which can be characterized as a breach of procedural fairness or an abuse of administrative discretion under . . .the Canadian Charter of Rights and Freedoms – comes down to a concern that routine inspections could be turned into covert investigations that would otherwise*

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[66] Such powers and the circumstances in which they may be exercised are set forth in the *FSQA, supra* note 25, ss. 15-29.

[67] *FSQA, supra* note 25, ss. 31-32.

[68] *FSQA, supra* note 25, s. 14 would permit limits to be placed on the powers of inspectors in the document appointing them. It would be possible, therefore, for OMAF to create categories of inspectors. However, it is unclear how operators or members of the public would know whether the powers of an inspector had been restricted. In the absence of an administrative restriction, all inspectors would be treated the same.

> *require the use of search warrants or other procedural protections. When inspectors are truly acting as investigators, they are required to adhere to the stricter procedural requirements of the investigation process.*
>
> *Although the determination of whether an individual is acting as an inspector or an investigator can be factually difficult, the problem can be avoided by a clear separation of functions and personnel. So long as inspectors function solely as inspectors and do not also participate in the investigation process, and so long as investigators stick to investigations and do not improperly use inspection powers to assist, it is difficult to see how Charter or procedural fairness problems will arise. For these reasons, it is important that the investigation and enforcement function be kept separate from other functions . . . This does not mean that there cannot be communication between inspectors and investigators. So long as the lines of communication remain formal, so the functions of the two groups are not seen to meld, the procedural rights of those being regulated can be protected.*[69]

I agree with those observations.

I recommend that the *Food Safety and Quality Act, 2001* be amended to differentiate between the powers and duties of inspectors and investigators.

11.3.1.8.2 Location of the Investigation and Enforcement Function

The current system of compliance and enforcement is fragmented and confusing. Those responsible for regulatory enforcement at OMAF also have additional, non-enforcement duties. While presiding over regulatory enforcement hearings, the Director also has responsibility for formulating, evaluating and revising food inspection programs, forming partnerships and cooperative undertakings with industry in respect of inspection services and participating in projects designed to review and improve industry performance.[70]

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[69] Ontario *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water* (Toronto, Queen's Printer for Ontario, 2002), Part II, pp. 450-451. See too *R.* v *Inco Limited* (docket C33137 and C33245, 6 June 2001) (Ont. C.A.) at www.ontariocourts.on.ca/decisions/2001/june/incoC33137.htm [accessed 19 February 2004].

The development and implementation of meat safety and inspection policies is vastly different from adjudicating an adversarial, legal process that may expose deficiencies in the very policies the adjudicator helped develop. Yet, as it now stands, the Director is asked to perform both functions.

The CAG does not have departmental status within OMAF[71] and the scope of the responsibilities of its members is largely unarticulated. At times, the activities of the compliance and advisory officers are designed to verify or facilitate compliance. They may attend premises, whether licensed or not, to observe, to inform or advise and then simply depart. In those instances, their role is more closely akin to a monitoring function and is appropriately conducted by personnel not involved in investigation and enforcement.

At other times compliance and advisory officers undertake surveillance, conduct interviews and make observations in an effort to obtain evidence to support a regulatory or non-regulatory enforcement proceeding. In those instances, they are acting as investigators despite the contractual delegation of that function to the MNR.

The qualification and experience needed to educate and advise producers, operators and consumers about food safety programs and the steps necessary to comply with regulatory standards are different than those needed to properly investigate and respond to suspected illegal activity. Presently, the duties of the members of the CAG blend enforcement and regulation.

The role of the EALO is mixed as well. The EALO's responsibilities to conduct regulatory hearings, monitor MNR investigations, establish investigative priorities, review legislation administered by OMAF from a law enforcement perspective, and annually review the contractual relationship with MNR, are tied to enforcement. In overseeing compliance and advisory officers the role is also educational and advisory. The position is contained within a Branch that promotes industry, provides inspection services and actively participates in regulatory and non-regulatory enforcement proceedings simultaneously.

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[70] OMAF provided the Review with a copy of the job description for the Director, Food Inspection Branch and various other positions.

[71] Organizational charts provided by OMAF show compliance and advisory officers as part of the Science and Advisory Program. The EALO is not shown as a member of any of the three existing programs, but reports directly to the Director.

By mixing enforcement with other services, OMAF has created an impression that enforcement is an afterthought and of low priority. While the objective of full compliance is laudable, it is not realistic. Investigation and enforcement services are and will continue to be necessary. OMAF's structure should recognize that fact. Structural separation of investigation and inspection within OMAF is overdue.

Given the extent to which the enforcement function has been delegated by OMAF, some may be tempted to suggest that OMAF should simply abdicate all responsibility for investigation and enforcement to the MNR. That is not appropriate.

OMAF has delegated much of the responsibility for the operational delivery of non-regulatory enforcement to the MNR. However, the extent of the involvement of the EALO shows the delegation is not complete. OMAF's contractual right to terminate agreements with the MNR also demonstrates that the arrangement is not permanent. Nor can it be. The existing statutory regime and the *FSQA* envision OMAF being accountable for the meat regulation system from licensing through enforcement. They do not allow OMAF to abandon its responsibility. While OMAF can and should continue to be able to delegate delivery of day-to-day investigative and enforcement services for reasons of efficiency and expertise, the location of the investigation and enforcement function should recognize that OMAF is, ultimately, accountable for them.

In the Walkerton Report, the Commissioner wrote:

> *There are many examples in Ontario of policy, abatement and enforcement functions existing successfully within the same ministry or entity. Having the various functions co-exist successfully within the same ministry requires both an*

> *assurance of the principle that strict enforcement is necessary and of procedural fairness.*[72]

I agree and will address the concept of strict enforcement shortly. In my view, procedural fairness requires substantial structural and functional separation of investigators from persons not involved in enforcement.

Earlier I recommended the creation of a Food Safety Division within OMAF to be overseen by an Assistant Deputy Minister, with the title of Chief Veterinarian of Ontario (CVO) and outlined my reasons for doing so.[73] The delivery of investigation and enforcement services should be the responsibility of the Food Safety Division and the CVO. In order to ensure that the distinction between investigators and others is maintained, sufficient independence should be provided to ensure that a strict approach to enforcement can be adopted and which recognizes the importance of procedural fairness.

I recommend that a Food Safety Investigations and Enforcement Branch be created within the Food Safety Division of the Ministry of Agriculture and Food.

I recommend that the Director of the Food Safety Investigations and Enforcement Branch be appropriately qualified, trained and experienced in agricultural and food safety investigations and enforcement.

11.3.1.8.3 Food Safety Investigations and Enforcement Branch

While I will discuss a continued delegation arrangement with the MNR later in this chapter, establishing a Food Safety Investigations and Enforcement Branch (FSIEB) will eliminate confusion, promote efficiency and establish clear accountability if the FSIEB is given the authority, responsibility and human and financial resources to deliver all aspects of the investigation and enforcement service.

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[72] Ontario *Report of the Walkerton Inquiry: A Strategy for Safe Drinking Water* (Toronto: Queen's Printer for Ontario, 2002), Part II, pp. 450.
[73] That recommendation was made in Chapter 6.

The day-to-day responsibility of the Food Inspection Services Branch will lie in the areas of licensing, monitoring, prevention, audit, education and advisory services. The usual activity of inspectors, area managers, the field manager, veterinarians, auditors and education and advisory staff will continue but once there is a suggestion that the ability to ensure compliance has been seriously compromised or that public health or animal welfare concerns have been ignored, assistance will be readily available from a separate FSIEB.

The responsibilities of the FSIEB should include:

- establishing and implementing a comprehensive, written compliance, investigation and enforcement policy;
- ensuring that all of its members have appropriate qualifications, education, experience and training;
- receiving and investigating complaints of non-compliant or illegal conduct;
- appropriately responding to complaints and developing guidelines and procedures to facilitate doing so;
- conducting preventative activities including intelligence activities;
- liasing with others both within and outside the provincial government including other Branches of the Food Safety Division, other ministries, the CFIA, the OSPCA and police forces;
- reporting to the CVO; and
- developing procedures for public communication including media releases, website postings and advisories to industry.

I recommend that the Food Safety Investigations and Enforcement Branch be given the authority, responsibility and resources necessary to enforce food safety legislation administered by the Ministry of Agriculture and Food.

11.3.1.8.4 Enforcement Principles

OMAF's internal documents direct that plant operations be immediately suspended, product detained and the status of an operator's licence questioned in the event of slaughter without *ante mortem* inspection and that the mistreatment of animals not be tolerated. Such directions evidence the importance of public safety and animal welfare objectives and suggest an approach of strict enforcement.[74] Yet that has not been the experience.

Copies of licensing decisions rendered by the Director or acting Directors since 1991 have been provided to the Review. They suggest a conciliatory, rehabilitative and tolerant approach to regulatory enforcement. Between 1998 and 2003 ten incidents of illegal slaughter activities by licensed abattoirs were brought before the Director and proven. Only once was the licence revoked. Usually, short periods of suspension were ordered, warnings were given or operators were required to agree in writing to do that which the law already requires.

Excerpts from logs prepared by several inspectors during attendances at one abattoir were reviewed.[75] Of concern is the extent to which their observations varied over a short period of time. Inevitably relationships between plant operators and inspectors may vary and slight differences in the experience are to be expected. It seems unlikely however, that business practices and systems will change back and forth in significant respects and within days depending on which inspector is present. Yet log entries suggest that occurs.

Audit records revealed deficiencies in plants that ranged from a few to dozens, from mild to serious. As expected, some poor audit results related to plants which were the subject of negative comment from the day-to-day inspection services. On the other hand, some audit reports revealed serious deficiencies in plants where day-to-day inspection by meat inspectors revealed no history of concerns. This is difficult to reconcile.

Non-ambulatory animals are not to arrive at licensed plants unless accompanied by a veterinary certificate. The number of incidents where this has occurred is high.[76] OMAF's response has been to hold such animals and to release them as if the veterinary certificate had been present upon receipt of satisfactory test results. In 2002, an OMAF program manager infrequently sent letters of concern to plants receiving non-ambulatory animals without veterinary certificates. If forwarded at all, the same letter was utilized no matter how often the deficiency had been identified. No other action was taken.

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[74] Set forth in OMAF, *Meat Inspection Policy and Procedure Manual* (Revised, 1 June 2003), sections 2.03, 17.01 and 17.02.

[75] Log sheets for approximately eight and a half months of a twelve month period were obtained by the Review for the period from November 2001 until November 2002 in respect of an operator licensed under the *MIA*.

Despite dozens of such incidents in 2003 involving the same operator, not even a letter of concern or warning was forwarded. OMAF has attributed that fact to an "administrative change" and indicated, in response to the Review's inquiry, that corrective action had been taken.

OMAF has advised the Review that the number of occurrences involving non-ambulatory animals is in decline. Even so, it is unclear whether this is a result of extra vigilance or rather attributable to the fact that a large provincial plant specializing in "downers" ceased to operate in 2003. Further, the assertion ignores the fact that, to date, OMAF has barely enforced rules relating to non-ambulatory livestock in respect of regulated species other than cattle.[77]

These examples demonstrate that there is, unfortunately, ample support for my conclusion that OMAF's performance in the area of compliance and enforcement is wanting.

In order to secure public confidence in the meat supply and confirm OMAF's commitment to the objectives of public safety and animal welfare, it is imperative that the principle of strict enforcement be adopted as the foundation upon which a compliance, investigation and enforcement policy will be developed and applied. Those who disregard the interests of public health or animal safety must clearly understand that serious adverse consequences will follow.

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[76] Non-ambulatory animal incident reports were provided to the Review by OMAF for 2003.

[77] As evidenced by the non-ambulatory incident reports and internal communications between MNR and OMAF.

I recommend that the Ministry of Agriculture and Food increase its commitment to the enforcement of its food safety legislation.

11.3.1.8.5 Compliance, Investigation and Enforcement Policy

Compliance, investigation and enforcement policies are common. Indeed, a simple reference to other ministries within the provincial government provides good, current and comprehensive examples. In addition, the Review was provided with others, including the Enforcement and Compliance Policy of the CFIA, Toronto Public Health's Enforcement and Legal Process Policies and Procedures, 2003 and portions of such policies utilized by the OSPCA.

Articulation of an enforcement policy by OMAF is overdue. Safe food is of critical importance. The regulatory system is, both legislatively and operationally, complex. Our state of knowledge, experience and the range of issues encountered are changing and evolving. For purposes of clarity, efficiency, uniformity, certainty and fairness, a comprehensive enforcement policy should be developed to provide a useful and ready reference for all members of the Food Safety Division whether involved in monitoring, education, advisory services, compliance, investigation or enforcement. The enforcement policy should:

- clarify and specify the roles and responsibilities of all staff in preventing, identifying, investigating and responding to instances of non-compliance;
- articulate objectives, underlying principles and guidelines;
- describe the standards to be enforced and their source, whether by statute, regulation, policy statement, guideline or protocol;
- describe and distinguish between monitoring, compliance and advisory, and investigation and enforcement functions;
- outline the range of responses and criteria to be applied in exercising any discretion conferred; and
- describe chains of command, approval processes and mandatory regulatory and non-regulatory responses to non-compliant activity.

The enforcement policy should be treated as evolving. It should be reviewed and updated based on experience, subsequent events and comments received both within and outside OMAF in an effort to ensure that the enforcement policy is current, relevant, practical, fair and consistent with the objectives of the Food Safety Division.

I recommend that the Ministry of Agriculture and Food develop and implement a comprehensive compliance, investigation and enforcement policy.

11.3.1.8.6 The Existing Role of the Director and the Future Role of the Chief Veterinarian of Ontario in Enforcement

Both in current and proposed legislation, the Director is given the power to make a licensing decision which is adverse to the applicant or operator. The power to refuse to grant or renew, to suspend or to revoke licences is not purely administrative. A decision which adversely affects a licence, except to the limited extent of a provisional suspension, may only be made after a licensing hearing has been conducted. The hearing is, essentially, a trial involving important issues and matters of public interest. Witnesses are called, including OMAF employees. Their evidence is critical to a determination of the underlying factual situation and often conflicts with testimony called by the operator. Circumstances are often emotionally charged since allegations may relate to alleged illegal slaughter activities, the sale of unwholesome product, animal welfare or physical or verbal abuse. The competence or integrity of various persons, including OMAF employees, may be questioned.

The Director is in an unenviable position. As the senior OMAF employee responsible for the delivery of food inspection services, there is an obligation on the Director to be intimately aware of the meat inspection program, its various components and the delivery of those services to the industry generally and to licensees specifically. The Director also knows the people in the industry. There is, inevitably, inside knowledge of the strengths and weaknesses of the program, its members and its operators.

As a quasi-judicial officer, the Director has an obligation, once an event which triggers or may trigger a hearing has occurred, to ensure that the expectation and requirement of impartiality is observed. In those instances, there is a continuing expectation of independence. The Director's decision should be based on the evidence before the Director at the hearing. The Director is in a difficult position no matter what order is made. If the decision is adverse to that sought by the EALO, OMAF employees may feel unsupported and embarrassed. Conversely, agreement with the position advocated by the EALO may lead to criticism that the Director is not sufficiently understanding and supportive of the industry. No matter the result, the Director has to return to work the following day and resume his position on the tightrope between the inspectorate and the operators.

In any event, despite the Director's best efforts, best intentions and integrity, hard feelings are bound to be created by reason of the Director's involvement in the hearing process. The system, to that extent, is flawed and should be changed.

If my earlier recommendation is implemented, a Food Safety Division will be created, headed by the CVO who will oversee the activities of the FSIEB, the Food Safety Inspection Services Branch and the Food Safety Science and Policy Branch. Given the recommended duties and the expertise of the CVO, the initial decision making power with respect to the granting of a licence, its renewal, suspension or revocation should be transferred from the Director of the Food Inspection Branch to the CVO.[78]

However, transferring the hearing function from the Director to the CVO will not eliminate the conflict under which the Director currently labours in presiding over hearings but simply make the CVO the unfortunate recipient of an imperfect system. The solution lies in giving the CVO administrative licensing responsibility only and eliminating involvement in the regulatory hearing process.

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[78] A number of statutes provide useful examples. For example, in the *Motor Vehicle Dealers Act, 2002*, S.O. 2002, c. 30, s. 9 the registrar appointed under that statute is given the authority to notify an applicant or registrant of the registrar's intention to refuse to grant, refuse to renew, to suspend or revoke a registration. The applicant or registrant then has the statutory right to request a hearing by the Licence Appeal Tribunal within a specified number of days. While not proclaimed, the provisions of the *Motor Vehicle Dealers Act*, R.S.O. 1990, c. M.42, s. 7 are similar.

While discretion should not be eliminated, circumstances permitting non-renewal, suspension or revocation should be established by regulation. They should include a history of non-compliant behaviour, poor audit results, a failure to fulfil the terms of a corrective action plan or participation in an earlier licensed operation where the licence was not renewed or suspended or revoked for non-compliance. Circumstances requiring the CVO to take action in respect of an issued licence should also be delineated, including instances of serious non-compliance which jeopardizes human health or animal welfare.

The CVO should have no jurisdiction to conduct hearings of any kind. The right of review of the CVO's licensing decisions and of orders granted by inspectors of a compliance or a preventative nature should, instead, be transferred to an independent body such as the Tribunal or to some other, as yet unestablished body with expertise in dealing with food safety and animal welfare issues.

If proclaimed, the *FSQA* would give the Director the authority, and in some instances the obligation, to impose administrative penalties and to conduct hearings related to them.[79] Once again, the power should be transferred to the CVO in light of the structural changes I have recommended but should be purely administrative with guidance provided by regulation. The hearing function should be transferred to the Tribunal.

I recommend that the *Food Safety and Quality Act, 2001* be amended to give the necessary authority for administrative licensing and imposition of administrative penalties to the Chief Veterinarian of Ontario.

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[79] *FSQA, supra* note 25, s. 41(6). The powers should be broadly given to the CVO to address incidents of non-compliance by any person. Since a right to a hearing is given, consideration should be given to enhancing the means of collection presently set forth in s. 41(13) and to require, where the administrative penalty is assessed against a licensed operator, a suspension of the licence in the event the penalty is not paid within the permitted time. I have not recommended that investigators be appointed provincial offence officers because I believe the number of premises to be licensed and the number of complaints, whether relating to licensees or not, can best be managed by a firm and fair approach overseen by the CVO with assistance from the FSIEB.

I recommend that the *Food Safety and Quality Act, 2001* be amended to require that all hearings in respect of licensing matters, orders of inspectors or administrative penalties be conducted by the Agriculture, Food and Rural Affairs Tribunal or other tribunal created for that purpose.

Given the seriousness and formality of regulatory proceedings, operators are often represented by lawyers. Despite the fact that a regulatory hearing is, essentially, a trial involving substantial issues and matters of public importance, OMAF's interest is currently represented by a person who is not legally trained. That practice should not continue. The interests of OMAF at regulatory hearings should be represented by that Ministry's Legal Services Branch.

11.3.1.8.7 Agriculture, Food and Rural Affairs Tribunal

Given the fact that there has been no appeal from a decision of the Director under the *MIA*, *DADA*, or the *LCSA* to the Tribunal since 1991, the Tribunal may have limited expertise in respect of food safety matters.

Created by the *Ministry of Agriculture, Food and Rural Affairs Act*,[80] the Tribunal hears proceedings under a range of agricultural statutes including the *Milk Act*, the *Farm Products Marketing Act*, the *Crop Insurance Act*, the *Drainage Act*, the *Farm Registration and Farm Organizations Act* and the *Assessments Act*. The Tribunal has extensive rules of procedure in respect of a range of matters including licensing appeals.[81] The Tribunal appears to be well-positioned to commence work in respect of matters relating to meat safety with the proclamation and amendment of the *FSQA*. Steps should be taken to ensure that the Tribunal includes members who have knowledge of food safety and animal welfare issues. Because of the nature of the meat industry, it is also important that operators have access to the Tribunal without delay.

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[80] *Ministry of Agriculture, Food and Rural Affairs Act*, R.S.O. 1990, c. M.16.

[81] The rules of procedure for the Agriculture, Food and Rural Affairs Tribunal are posted at www.gov.on.ca/OMAFRA/english/tribunal/rulesofprocedure/index.html [accessed 22 April 2004].

For reasons of deterrence, transparency, certainty, education and the integrity of the system as a whole, I believe it is important that the decisions of the Tribunal be generally available and that they be posted on the Tribunal's website. The public should not have to resort to freedom of information legislation to obtain access to decisions relating to regulated industries and which deal with issues affecting public safety.

11.3.1.8.8 Other Legislative Changes

The existing legislative scheme is out of date and in need of an overhaul as evidenced by the passage of the *FSQA*. The principal changes in respect of investigation and enforcement are:

- the introduction of administrative penalties as already found in other provincial and federal legislation;[82]
- a broadening of offence provisions;
- more significant monetary and non-monetary penalties;
- increased court involvement in facilitating investigations, preventing non-compliant activity and minimizing its effects;[83]
- conferring additional powers on inspectors including the ability to stop and inspect vehicles, to take samples, to conduct tests on meat and meat products and to have access to and to copy data from information systems; and
- permitting inspectors to issue orders designed to prevent, decrease, control or eliminate food safety risks or to ensure that non-compliant activity does not occur or, if identified after the fact, ends.

While the *FSQA* introduces a number of improvements to existing legislation, others are needed. They include:

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[82] *FSQA*, *supra* note 25, s. 41. For example, administrative penalties are available under the *Environmental Protection Act*, R.S.O. 1990, c. E.19, s. 182.1, the *Ontario Water Resources Act*, R.S.O. 1990, c. O.40, s. 106.1 and the *Nutrient Management Act 2002*, S.O. 2002, c. 4, s. 40. Federally, such penalties are permitted by the *Agriculture and Agri-Food Administrative Monetary Penalties Act*, S.C. 1995, c. 40. The latter statute's stated purpose is to establish, as an alternative to the existing penal system and as a supplement to existing enforcement measures, a fair and efficient administrative monetary penalty system for the enforcement of specified agri-food Acts.

[83] *FSQA*, *supra* note 25, ss. 17, 18, 20, 22, 36, 37, 41(13), 42, 43, 46(4).

- eliminating the automatic requirement that applicants or licensees be given a reasonable opportunity to show or to achieve compliance before licensing hearings. The requirement does not distinguish between conduct which is isolated or recurrent, minor or serious. While subsequent compliance should be considered in assessing the penalty or sanction to be imposed, a hearing should not necessarily be delayed to afford the operator an opportunity to comply.
- the *FSQA*, while ambitious, needs substantial editing, refinement and simplification. Part IV of the *FSQA* and particularly sections 15-26 are specific examples. While they purport to describe different situations, they are, in fact, variations on a common theme demonstrated by the extent to which certain sections incorporate others by reference.
- while the maximum monetary penalties have been substantially increased, they are low when compared with other pieces of provincial legislation dealing with health and safety issues and with legislation from other jurisdictions dealing with food safety.[84]
- despite their broadening, offence provisions are still too narrow. An attempt to do anything that would be an offence under the *FSQA* should, itself, be an offence.[85]
- the offence provision dealing with corporations is too restrictive. Any person who is concerned or takes part in the management of a corporation which commits an offence should also be guilty of the

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[84] See for example *MIA*, R.S.C. 1985, c. 25 (1st Supp.) s. 21(1) which imposes a maximum fine of $250,000 or imprisonment for a term not exceeding two years or both for selling any product upon which an inspection legend has been applied without authorization. Under the *Canada Agricultural Products Act*, R.S.C. 1985, c. 20 (4th Supp.) s. 33, a contravention of the Act or its regulations constitutes an offence. If the Crown proceeds by way of indictment and obtains a conviction, the maximum fine is $250,000 or imprisonment for a term not exceeding two years or both. Under the *Occupational Health and Safety* Act, R.S.O. 1990, c. O.1, s. 68(2), the maximum time fine for corporations is $500,000. The *Fish and Wildlife Conservation Act, 1997*, S.O. 1997, c. 41 increases the penalty based on activity rather than the legal entity involved. The maximum penalty is increased from $25,000 to $100,000 if the activity is committed for commercial as opposed to private purposes.

[85] As found in the *Fish and Wildlife Conservation Act, 1997*, S.O. 1997, c. 41, s. 97(2). A useful example is found in the State of Victoria's *Food Act 1984*, (Vic), s. 51. That section provides that if a corporation is guilty of an offence "any person who is concerned or takes part in the management" of the company is also guilty of the offence unless that person proves "that the offence was committed by the body corporate without his consent or knowledge and that he exercised due diligence to prevent the commission of the offence." The *FSQA* is more limited in requiring involvement in the offending activity itself.

offence unless that person proves the offence was committed without that person's consent or knowledge and that due diligence was exercised to prevent its commission;[86]

- an offence by an employee during the course of employment should expose the employer to prosecution unless the employer can satisfy the court that the offence was committed without the employer's knowledge and could not have been prevented by the exercise of due diligence.[87]
- the FSQA limits the power of arrest to instances involving fish.[88] That limitation is illogical. The possibility of egregious conduct warranting arrest exists in respect of all commodities and the power should be conferred accordingly.
- common sense presumptions should be established. By way of example, the *FSQA* should expressly provide that it is presumed that food on-site at food premises is intended for sale and for human consumption absent proof to the contrary.[89]
- unlike other pieces of provincial legislation, the *FSQA* does not confer upon the Crown the ability to require that prosecutions be heard by a justice of the Ontario Court of Justice. An appropriate amendment should be made.[90]

I recommend that the *Food Safety and Quality Act, 2001* be amended to eliminate any automatic period for compliance before a licensing hearing, to simplify its enforcement provisions, increase monetary penalties, revise offence provisions to address issues of attempts,

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[86] In the *Food Act 1984*, (Vic), s. 52A, if an employee commits an offence, the employer is deemed to have done so as well unless "it is established that the employer could not, by the exercise of due diligence have prevented the contravention."

[87] *FSQA, supra* note 25, s. 30.

[88] Based on the *Fish and Wildlife Conservation Act, 1997*, S.O. 1997, c. 41, s. 93. There is no comparable provision in the *MIA, DADA, LCSA* or *LLPA*. That deficiency should be rectified. Similarly, under the existing Cooperative Agreement, p. 19, MNR investigators are prohibited from carrying firearms, batons or pepper spray. Given the nature of the activities investigated, the instruments utilized to slaughter animals and to process meat, the wisdom of prohibition should be reconsidered.

[89] Such a presumption is found in the *Food Act 1984*, (Vic), ss. 50(1)(a) and 50(1)(b).

[90] Such a right is granted by the *Occupational Health and Safety Act*, R.S.O. 1990, c. O.1, s. 68(2); the *Environmental Protection Act*, R.S.O. 1990, c. E.19, s. 185 and the *Nutrient Management Act, 2002*, S.O. 2002, c. 4, s. 47.

employer and management responsibility, create rebuttable presumptions, and to permit prosecution before a Justice of the Ontario Court of Justice.

11.3.1.8.9 Reporting

To date, OMAF has been reticent to publicize successful prosecutions or the results of regulatory hearings. Such information promotes awareness, educates the public about the meat regulatory system and its rationale and has a role to play in deterring or uncovering similar activity. OMAF's reluctance is not widely shared by other enforcement bodies. I believe publication is important and should be undertaken.

In order to ensure that the enforcement and compliance mandate is transparent and accountable to the public, the FSIEB should prepare and publish an annual report concerning investigation and enforcement activities. The annual report should, at a minimum, summarize the number of complaints, their nature, by statute and section, the investigations undertaken, the steps taken by way of compliance and regulatory or non-regulatory enforcement, and their results. The report should be posted on OMAF's website.

I recommend that the Food Safety Investigations and Enforcement Branch publicize the results of prosecutions and regulatory hearings, and deliver an annual public report of investigation and enforcement activities.

11.3.2 Ministry of Natural Resources

11.3.2.1 Authority

While the MNR is presently charged, by statute, with the responsibility for overseeing the regulation of commercial fish processing activities,[91] it has no corresponding statutory obligation in respect of the production, processing or sale of meat derived from farm animals.

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[91] *Fish Inspection Act*, R.S.O. 1990, c. F.18.

Since the role of the MNR in the meat regulation system is non-statutory, the contractual documents entered into with OMAF determine its nature and extent. The relationship is one that either ministry can terminate at any time.

As I have already said, the transfer of the non-regulatory enforcement function to the MNR is a partial one. OMAF has retained accountability and financial responsibility. OMAF continues to exercise decision making authority in respect of human and financial resources, responsibility for the formulation of policy, legislation and supporting regulations, chooses cases to assign, has a right of access to information concerning MNR's investigations and has the right to influence the path enforcement action will take insofar as licensed operators are concerned.

Subject to those limitations, once referred, the conduct of investigations lies with the MNR.

The MNR is also contractually obligated to:

- prosecute charges through its Legal Services Branch;
- train agriculture investigators;
- regularly report to OMAF concerning investigations, intelligence activities and prosecutions;
- consult with OMAF in order to establish a strategic plan and priorities;
- implement and maintain an electronic enforcement tracking system;
- generate reports on enforcement program statistics as required by OMAF; and
- monitor legislation administered by OMAF and recommend changes or improvement.[92]

11.3.2.2 Organizational Structure

In order to perform its contractual mandate, the MNR has established an Agriculture Investigations Unit (AIU) comprising a supervisor, three agriculture investigators employed by MNR and an OMAF compliance and advisory officer who has been temporarily seconded to the MNR to serve as an agriculture investigator. They devote their full time and attention to matters referred to the MNR by OMAF.

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[92] As set forth in the unexecuted Cooperative Agreement and Service Level Agreement provided to the Review.

The AIU is part of MNR's Intelligence and Investigations section which is overseen by a manager. That section is, in turn, part of MNR's Enforcement Branch. The activities of the AIU are funded by OMAF and while the budget for the AIU has increased somewhat from approximately $470,000 to $700,000 annually, it is still a modest one.

If circumstances require, the AIU may draw upon other MNR resources to facilitate or complete a task.[93]

11.3.2.3 Comments and Recommendations

Prior to 2000, when OMAF looked after non-regulatory enforcement internally, very few charges appear to have been laid. A review of the enforcement statistics shows a substantial increase in the number of charges, convictions and fines since the Cooperative Agreement and Service Level Agreement were executed. According to the MNR, during its tenure of approximately four years, 276 meat related charges have been dealt with by the courts resulting in total fines exceeding $165,000.[94]

Originally, it was envisioned that MNR's role would be in the fields of intelligence and enforcement. I have been told by the MNR that it has been unable to pursue proactive intelligence activity in any meaningful way. There has simply been no available time.

OMAF has entrusted MNR with much wider responsibility than the regulation of meat. MNR could, potentially, be required to provide services under more than forty statutes, many of which have little or nothing to do with meat safety regulation. For example, MNR investigators have been utilized by OMAF to determine the validity and amount of claims asserted under the financial protection provisions of the *Beef Cattle Marketing Act*[95] in the aftermath of the economic failure of an agricultural dealer. In 2002, the MNR estimated that over 45% of its investigators' time was utilized in investigations unrelated to meat safety.[96]

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[93] In dealing with Wallace Beef Inc., for example, the services of two conservation officers were utilized.

[94] Statistical information was provided to the Review by the MNR.

As I indicated earlier, in 2002, MNR's agriculture investigators were overloaded by the number and range of matters received. Many cases were returned to OMAF. During the Review, I was advised that there are many cases at OMAF waiting to be assigned to MNR investigators when there is capacity to accept them.

Representatives of OMAF and the MNR have told me that the relationship is an effective and evolving one. They want it to continue and acknowledge there is room for improvement. Despite increased enforcement activity, the statistics are still modest. For example, in 2003 a total of 10 charges were laid under the *MIA*, *DADA* and the *LCSA* and a number of previously laid charges were resolved, resulting in a total of 57 convictions and aggregate fines slightly in excess of $70,000.

While those numbers would be of little concern if I was satisfied they reflected the level of illegal activity, the information I received suggests otherwise. The reality is that there are insufficient resources, both human and monetary, to adequately enforce existing legislation and proclamation of the *FSQA* will only exacerbate the problem by shifting responsibility to OMAF for the regulation of FSMPs.

While I am not in a position to say how prevalent illegal activity is, I was told by law enforcement bodies, regulators and a range of stakeholders that illegal slaughter and the sale of uninspected meat is a real problem in the province of Ontario.

Allowing illegal activity to continue is unfair to those who are compliant. Compliance with regulation results in economic costs. It is unfair that others carry on business without having to bear that cost. But more importantly, public health and safety is jeopardized. Despite the breadth of existing regulation, over the years, a small number of licensees have undertaken practices which place the wholesomeness of their product in doubt. One can only imagine the extent to which those concerns are magnified when dealing with those who have avoided regulation entirely. Unlicensed operations ignore the entire legislative and regulatory scheme. Unsuspecting consumers have no idea of the risks they may be taking in the pursuit of inexpensive meat.

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[95] *Beef Cattle Marketing Act*, R.S.O. 1990, c. B.5.
[96] Based on an estimate contained in documentation provided to the Review.

11.3.2.3.1 Future Delegation

Effective enforcement requires the application of resources to statutes and regulations that are relevant to food safety. While financial protection legislation is undoubtedly important, the task of verifying claims is more akin to that performed by insurance adjusters.. Such duties should not be assigned to MNR investigators who offer policing services. If the relationship between OMAF and the MNR is to continue, responsibility for statutes unrelated to the mandate of the Food Safety Division should be removed from the ambit of services to be provided by the AIU.

While inadequately resourced, the MNR offers services through a well-established, well-organized and substantial infrastructure extending beyond the AIU. The AIU is a specialized unit devoted to the enforcement of agricultural legislation but is governed by the same policies, training programs and information systems as other elements of MNR's Enforcement Branch except to the extent constrained by the contracts with OMAF.

In my view, the FSIEB should be staffed through a continuation of OMAF's relationship with the MNR. Details of the arrangement can be settled either by a new or amended Cooperative Agreement and Service Level Agreement. While the MNR would, under such an arrangement, have operational responsibility for delivery, OMAF would retain ultimate accountability and provide oversight. Since continued delegation involves adapting an existing strong and established relationship between the two ministries, this possibility seems sensible and achievable. Given the broad power of delegation which will be conferred upon OMAF if the *FSQA* is proclaimed, this option also appears to be legislatively permissible.[97]

11.3.2.3.2 Resources

The enforcement function must be adequately resourced. Even if some agricultural statutes are eliminated from its contractual duties, the number of investigators is simply insufficient. The *FSQA*, if proclaimed, will require OMAF to exercise oversight in respect of several hundred FSMPs and likely result in additional need for compliance and enforcement activities. The insufficiency of existing resources has been recognized for some time. MNR's frequent requests for additional funding to facilitate the hiring of additional agriculture investigators have not, for the most part, been approved.

The MNR has suggested to the Review that the number of investigators should be increased from four to twelve. It appears to me that this estimate is a reasonable one. The MNR has also suggested that an intelligence analyst is needed who would have responsibility for gathering information from multiple sources to assist in determining trends, successes, failures, areas of concern and to facilitate planning, prioritization and delivery. I agree that such a position should be created. Information gathered by an intelligence analyst may also be of assistance in determining appropriate staff levels on an ongoing basis. The FSIEB must be adequately staffed and funded.

11.3.2.3.3 Training

It is, and will be, important for investigators to have a working understanding of the food safety system, its rationale, the risks which the system is designed to control or eliminate and the appropriate methods of doing so in order to facilitate the identification and investigation of non-compliant or illegal activities.

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[97] *FSQA, supra* note 25, ss. 48 and 49. Section 48 authorizes the Minister of Agriculture and Food to enter into a broad range of agreements. Section 49 outlines the circumstances in which the Minister of Agriculture and Food may designate provisions of the *FSQA* or a regulation and delegate administration or enforcement of the designated provisions to others. While s. 50(4) of the *FSQA* attempts to insulate those connected with OMAF from personal liability in certain situations, it would not appear to assist employees of the MNR acting as investigators if proclaimed in its present form.

I recommend that the Ministry of Agriculture and Food develop and implement introductory and continuing education courses for investigators pertaining to meat safety and its regulatory scheme.

11.3.2.3.4 Joint Task Force

During the Review, the OSPCA asked me to recommend that the provincial government establish a fully funded joint task force or combined special enforcement unit involving OMAF, MNR, OSPCA, the Ontario Provincial Police and local health units to address illegal slaughter activities in the province. The recommendation was designed to formalize an informal organization which has been coordinated by the EALO involving representatives of OMAF, MNR, local health units in Toronto, Durham, Halton and York, the OSPCA and the CFIA.[illegible] Although not appropriate for a recommendation, the request merits comment.

The recommendation by the OSPCA reflects a concern arising from the limited human and financial resources devoted, to date, by the provincial government to meet the need for food safety investigations and enforcement. I am hopeful that those concerns have been addressed in my recommendations and that their implementation will enable OMAF, through the MNR, to quickly address the backlog which has built up over many years. However, if that does not occur, the provincial government should give consideration to the establishment of a joint task force involving representatives of various enforcement agencies for the purpose of addressing significant or long outstanding food safety or animal welfare concerns within OMAF's mandate. Since illegal slaughter activities and the sale of uninspected meat may involve aspects of interprovincial or even international trade, an invitation to the CFIA to participate in such an endeavour may be warranted.

[illegible] Documents relating to meetings of the members of the group were provided to the Review.

11.3.3 Ministry of Health and Long-Term Care (MOHLTC) and Boards of Health

11.3.3.1 Authority

By virtue of their office, all medical officers of health and local health inspectors are appointed as meat inspectors under the *MIA*.[99] Despite that fact and the application of the *HPPA* to all food premises, the inspection of abattoirs, and related processing and retail facilities is left to OMAF and its inspectors.[100]

The MOHLTC and Ontario's 37 public health units presently exercise regulatory control over FSMPs and retail food premises.[101] The frequency of routine inspections of FSMPs and retailers varies depending on a risk assessment and are conducted no more than three times per year for high risk premises.[102] Non-routine inspections are conducted on a complaint basis or to determine if a problem identified during a routine inspection has been rectified.

11.3.3.2 Organizational Structure

As outlined in an earlier chapter, the MOHLTC has published Mandatory Health Programs and Services Guidelines[103] which establish food safety and frequency of inspection standards. While the MOHLTC provides oversight and policy direction, inspection and enforcement services are provided by local Boards of Health.

Through routine, unannounced or complaint-based inspections, the extent to which FSMPs or retail food premises maintain their premises and equipment and adhere to business practices which assure public safety is monitored and critically reviewed.[104]

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[99] *MIA*, *supra* note 1, s. 15.

[100] *Ibid.*, s. 15(2).

[101] A memorandum of understanding was entered into between OMAF and the MOHLTC in 1994 detailing the arrangement.

[102] Pursuant to the *HPPA*, *supra* note 19, ss. 4, 5 and 61 and *Food Premises*, R.R.O. 1990, Reg. 562.

[103] MOHLTC, Mandatory Health Programs and Service Guidelines (December 1997). The Mandatory Guidelines are discussed in more detail in Chapter 9.

[104] Discussed in more detail in Chapter 8.

11.3.3.3 Regulatory Responses to Non-Compliance

Where instances of non-compliance are identified, public health inspectors and medical officers of health may issue a variety of orders including ordering corrective action, either immediately or within a specified period of time,[105] the removal and destruction of unwholesome product,[106] or, if necessary, closure of the food premises until the concerns have been addressed.[107] If required to address immediate concerns, such orders may be made orally.[108]

While orders made by public health inspectors or medical officers of health may be appealed, within 15 days of their making, to the Health Services Appeal and Review Board (Review Board),[109] the order remains in effect until the appeal is heard.[110] Further rights of appeal to the court are given to any party to the initial hearing before the Review Board.[111]

Some public health units provide the results of inspections to the public either upon request or by posting on their websites.[112]

11.3.3.4 Non-Regulatory Responses to Non-Compliance

Public health inspectors have been designated as provincial offence officers[113] for the purposes of enforcing the *HPPA* and consequently can initiate a charge under the *Provincial Offences Act* by issuing a summons or offence notice stipulating a fixed fine ranging from $50 to $375.[114] The recipient has the option of paying the fine voluntarily or disputing the charge in court.[115]

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[105] *HPPA*, *supra* note 19, s. 13(3) and 13(4).
[106] *Ibid.*, s. 13(4)(e) and 13(4)(g).
[107] *Ibid.*, s. 13(4)(a) and 13(4)(b).
[108] *Ibid.*, s. 13(7).
[109] *Ibid.*, ss. 44-45.
[110] *Ibid.*, s. 44(3).
[111] *Ibid.*, s. 46.
[112] See, for example, Toronto Public Health's Dine Safe website at www.app.Toronto.ca/food2/DineSafeMain [accessed 10 June 2004] and The Region of Waterloo Public Health food premise inspection disclosure site at www.region.waterloo.on.ca/web/foodinspection.nsf/paDisclaimer?OPage [accessed 10 June 2004]. The posting of such information can be an important incentive to comply. Few operators would want a poor inspection result made public. However, care should be exercised to ensure that information posted is accurate and amended if appropriate corrective action is taken.
[113] Appointed by the Minister of Health as permitted by the *Provincial Offences Act*, *supra* note 50, s. 1(2) & 3.

The contravention of certain sections of the *HPPA*, any order or any regulation made under the *HPPA*, constitutes an offence.[116] Upon conviction, a fine of up to $5,000 for every day or part of a day on which the offence occurs or continues may be imposed on individuals and is increased to $25,000 for corporations, municipalities or Boards of Health.[117]

The *HPPA*'s offence provisions are wide. Those who may be charged include persons involved in the overall management or day-to-day control of the offending activity.[118] Courts are empowered to order that any non-compliant activity cease and to prohibit its repetition.[119]

11.3.3.5 Compliance, Investigation and Enforcement Policy

The MOHLTC has not established a provincial compliance and enforcement policy. While local public health inspectors have the same broad statutory rights of entry, examination, investigation, testing and enquiry within their boundaries across the province, each local health unit is left to its own devices to develop and implement a compliance and enforcement strategy.[120] There is no consistent approach.

At one end of the spectrum is Toronto Public Health's substantial and current Enforcement and Legal Process Policies and Procedures Manual. At the other end are health units with no written policy. Most health units have developed some policies which address limited aspects of a compliance or enforcement strategy.

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[114] Proceedings commenced by Certificate of Offence, R.R.O. 1990, Reg. 950, Schedules 39-42. It should be noted, however, that Schedule 42 is based on R.R.O. 1990, Reg. 571, which has been repealed.

[115] *Provincial Offences Act, supra* note 50, ss. 3-13.

[116] *HPPA, supra* note 19, s. 100.

[117] *Ibid.*, s. 101.

[118] *Ibid.*, s. 101(2).

[119] *Ibid.*, s. 102.

[120] The summary of practices is based on questionnaires provided by the Review to all 37 Boards of Health and the 29 responses received.

11.3.3.6 Comments and Recommendations

11.3.3.6.1 Distinction between Inspectors and Investigators

When dealing with OMAF, I recommended that inspection and investigation be kept separate structurally and functionally. I did that because of the nature of the inspection services. Meat inspectors not only ensure compliance with the regulations but in the case of abattoirs facilitate their operation. There is no slaughter if the inspector is not present. This relationship creates the potential problems I alluded to earlier when I recommended a separation of inspection and investigation services within OMAF.

The relationship between public health inspectors and retail food premises is not the same. It is, in fact, the inspector's job to investigate the activities of food premises and take appropriate action if they identify an infraction. The issues of potential violations of the Charter of Rights and Freedoms and problems of procedural fairness that could arise with meat inspectors acting as investigators do not apply to public health inspectors.

11.3.3.6.2 Development of a Province-Wide Compliance Investigation and Enforcement Policy

The proclamation of the *FSQA* would see OMAF assume responsibility for the regulation of FSMPs.[121] While that would reduce the existing role somewhat, the MOHLTC and local health units would retain jurisdiction and responsibility over retail food premises.

Service delivery and standards are not uniform throughout Ontario's local health units. The frequency of inspection of FSMPs and retail food premises varies widely and depends on the number of establishments, geographical area, human and financial resources, the needs of other programs, unexpected events and emergencies.[122]

Enforcement statistics vary widely across the province as well. In some areas of Ontario, public health inspectors often exercise the power to issue offence notices or summons in respect of statutorily specified non-compliant activities and in the prescribed amount. In other areas of Ontario, the power is exercised infrequently, if at all. Some local health units compile statistical information concerning incidents of non-compliant activity, charges laid and convictions. Others do not. Where such information is compiled, the frequency of enforcement proceedings varies, even allowing for differences in population.

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[121] While it will be left to regulations under the *FSQA* to delineate what businesses will require a licence to commence or continue operation, it is clear that the current plan is for FSMPs to be overseen by OMAF

[122] OMAF outlined the criteria to the Review.

MOHLTC's 2003 Food Safety Audit Report[123] suggested that there were, province-wide, almost 67,000 consumer complaints relating to food and food premises, resulting in over 1,500 investigations of foodborne illness and foodborne outbreaks and over 1,300 food recalls. Toronto Public Health reported over 3,600 complaints within its jurisdiction alone resulting in almost 800 charges and over $100,000 in fines.[124] Clearly and appropriately, many health units have adopted the principle of strict enforcement to laws designed to protect public health. Elsewhere, that guiding principle has not been embraced.

Public health risks associated with FSMPs and retail food premises are no different than those which exist in processing or retail facilities connected to abattoirs. The risks in one part of Ontario are the same in another. The entire province is entitled to the same protection, to the same commitment to food safety and to a standardized approach to investigating and/or responding to non-compliant or illegal conduct.[125]

I recommend that the Ministry of Health and Long-Term Care, with assistance from Boards of Health, develop, implement and require adherence to a comprehensive province-wide investigation, compliance and enforcement policy extending to all food premises.

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[123] MOHLTC, *2003 Food Safety Audit Report*.

[124] Statistical information was provided to the Review in response to a questionnaire.

[125] Under the *HPPA*, *supra* note 19, s. 7(1), the Minister of Health may publish guidelines for the provision of mandatory health programs and services and every Board of Health shall comply with the published guidelines.

11.3.3.6.3 Legislative Changes

In modernizing the *MIA*, *DADA* and other provincial statutes, drafters of the *FSQA* appear to have obtained assistance from the breadth of the *HPPA* provisions dealing with investigations and enforcement. The *FSQA* contains provisions which are analogous to those in the *HPPA* but has, to some extent, expanded upon, modified and modernized them. For example, unlike the *FSQA*, the *HPPA* does not increase monetary penalties for a second offence, provide for the forfeiture of monetary benefits derived from non-compliant activity or extend the limitation period for the initiation of prosecutions. Rights of entry and powers of inspectors in the *HPPA* are more restrictive than in the *FSQA*. Many of the identified deficiencies in the *FSQA* apply to the *HPPA* as well.

Since the objectives of the *FSQA* and the *HPPA* are the same, the investigative and enforcement powers in the two statutes should be consistent. Amendment of the *HPPA* to improve the enforcement tools, to revise the offence and penalty provisions to deal with issues of attempts, employer and management responsibility, rebuttable presumptions and increased penalties should all be made. As suggested in respect of the *FSQA*, the Crown should also be given the discretion to require that offences be tried by a justice of the Ontario Court of Justice.

I recommend that the provincial government ensure that the enforcement tools and offence and penalty provisions of the *Health Protection and Promotion Act* are consistent with those in the *Food Safety and Quality Act, 2001*.

Absent consent from the owner or occupant, or a warrant, public health inspectors may not enter, examine or take samples from private residences.[126] The *HPPA* and the *Food Premises* regulation do not specifically address structures which house both a private residence and a retail food business. It is unclear, therefore, whether public health inspectors have authority, absent consent or a warrant, to exercise any of their powers in respect of residences which also include catering operations, or retail food stores. Once again, these businesses pose the same food safety risks whether included within or separate from a private residence. They should be required to meet the equivalent food safety standards and be subject to inspection.

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[126] *HPPA*, *supra* note 19, s. 1(1) defines food premise in a manner which excludes a private residence. See too ss. 41(7) and 42(2) of the same statute.

I recommend that the provincial government amend the *Health Protection and Promotion Act* and its *Food Premises* regulation to ensure that they apply to food businesses which are attached to or form part of a private residence.

11.3.4 Other Bodies

11.3.4.1 Ontario Society for the Prevention of Cruelty to Animals (OSPCA)

11.3.4.1.1 Current Approach

The authority of the OSPCA comes from the *OSPCA Act*. Its object is to facilitate and provide for the prevention of cruelty to animals and their protection.[127] OSPCA inspectors are expressly authorized to exercise the powers of a police officer for the purpose of enforcing any law in force in the province pertaining to the welfare of or the prevention of cruelty to animals.[128]

While the OSPCA is often associated with the investigation of the mistreatment of pets, its activities are much broader and include farm animals. The OSPCA has been involved in investigations and prosecutions relating to the raising, handling, transportation and slaughtering of farm animals. Those activities are now overseen by a livestock inspector and pursuant to a cooperative pilot project with OMAF, four OSPCA investigators have been appointed as inspectors under the *LCSA*.

In 2002 alone, the OSPCA investigated over 1,100 complaints relating to the treatment of farm animals. Charges laid by its inspectors included charges under the *MIA*, the *DADA* and the *Criminal Code* of Canada. Convictions in respect of activities of animal neglect, rough handling, inhumane slaughter and illegal slaughter were obtained.

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[127] *OSPCA Act*, *supra* note 3, s. 3.
[128] *Ibid.*, s. 11(1).

Successful prosecutions are the subject of media releases prepared and distributed by the OSPCA to inform the public of the OSPCA's activities, facilitate fundraising,[129] deter similar activity and encourage heightened awareness of and concern for animal welfare issues.

11.3.4.1.2 Comments and Recommendation

The guiding concern of the OSPCA for animal welfare results in the OSPCA treating violation of required standards seriously and firmly.

The OSPCA's concerns in respect of illegal slaughter, humane slaughter at abattoirs and the humane transportation of animals has resulted in the OSPCA laying charges under the *MIA* and the *DADA* despite the fact those statutes lie within the responsibility of OMAF and receive much attention from OMAF's compliance and advisory officers and MNR investigators.

While I have been told that the level of cooperation between OMAF and the OSPCA is excellent, it is clear that the OSPCA intervenes whenever it chooses. My concern is that the efforts of the OSPCA may overlap or even conflict with the efforts of OMAF and the MNR acting on its behalf.

OSPCA's dedication and initiative are commendable, but a cooperative and complementary approach is required to ensure efficiency and avoid activities that could jeopardize investigative or enforcement initiatives and the safety of investigators.

The line between animal welfare issues which are within OSPCA's mandate and food safety concerns which are not, is imprecise. There is no question that the humane treatment of animals in the production of meat is an important issue. I have visited an abattoir where standards exceeding the minimum required have been developed and are in place. They were designed to make animals more comfortable, simply because the operator believes that the quality of the meat is, as a result of those practices, improved. The view that additional stress will adversely affect the quality of the meat and result in adverse economic consequences is shared by many.

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[129] The OSPCA is a charity and receives only a modest contribution from the provincial government in respect of its activities. The rest of the OSPCA's funding comes from charitable donations. Press releases may be found on the OSPCA website www.ospca.on.ca

However, the suggestion that animal welfare issues jeopardize food safety is not as widely held.[130] Consequently, while the OSPCA's work in respect of animal welfare issues should continue to be regarded as essential, it is important that the OSPCA not regard its role as identical to that of OMAF and the MNR. It is not.

The OSPCA, OMAF and the MNR should act cooperatively. Recognition that OMAF and MNR, if the contractual relationship between the two ministries continues, carry the lead role in respect of violations of the *MIA*, the *DADA*, the *LCSA*, the non-ambulatory regulation under the *LLPA* and, if proclaimed, the *FSQA*, should be recognized, respected and supported. There should be frequent, formalized communication, a documented understanding which ensures that their respective goals and responsibilities are articulated and the extent to which their operations should be separate or joint clearly understood.

I recommend that the Ministry of Agriculture and Food, the Ministry of Natural Resources and the Ontario Society for the Prevention of Cruelty to Animals reconcile their roles and responsibilities with respect to the enforcement of food safety and animal welfare issues.

11.3.4.2 Police

Local police forces and the Ontario Provincial Police assist the MNR and the OSPCA by providing investigative support and a physical presence to maintain the peace during the execution of search warrants. Occasionally, the police conduct their own investigations in respect of possible criminal behaviour relating to allegations of the illegal sale of meat or the abuse of animals.[131]

The role of the police may be more significant in the future since the *FSQA* contemplates the police rendering assistance to inspectors where needed to facilitate the exercise of various powers whether undertaken with or without a warrant.[132]

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[130] For a more detailed discussion see Chapters 3 and 4 .

[131] *Criminal Code*, *supra* note 4, ss. 445-447 delineate criminal offences involving the mistreatment of animals. Such investigations have been undertaken with respect to Aylmer Meat Packers Inc. and Wallace Beef Inc. In light of the terms of the order in council constituting this Review, their status is unknown.

Regular communication with Ontario's police forces should be undertaken by the FSIEB in order to ensure that activities in the field and the potential for assistance to be requested are generally known and to ensure that any needed assistance can be provided quickly.

11.3.4.3 Canadian Food Inspection Agency (CFIA)

11.3.4.3.1 Current Practice

The CFIA is responsible for the enforcement of federal requirements having general application to the meat industry whether the participant is part of the federal or provincial system including:

- federal legislation prohibits the labelling, packaging, treating, processing, selling or advertising of food in a misleading or deceptive manner;[133] and
- federal legislation requires the safe and humane loading and transportation of farm animals.[134]

While not as visible in the provincial meat regulation system, the CFIA is, nonetheless, an important participant. The CFIA maintains a small Enforcement and Investigations Services Unit in Ontario staffed by an area manager and three investigation specialists.

The CFIA has developed a lengthy and comprehensive Enforcement and Compliance Policy which outlines essential activities, the roles and responsibilities of its personnel, possible non-compliant behaviour, and the regulatory and non-regulatory consequences of violation. A wide range of responses is described including written warnings, in limited cases administrative monetary penalties and formal charges requiring court proceedings. The policy deals with regulatory responses as well, including seizure, detention, forfeiture, condemnation or disposal of product, and actions in respect of licences or registrations ranging from suspension to cancellation.

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[132] *FSQA*, *supra* note 25, ss. 15(8), 16(3), 17(4), 18(2), 19(4), 20(2), 21(5), 22(2), 23(4), 24(4), 25(3), 26(5), and 36(6).

[133] *Food and Drugs Act*, R.S.C. 1985, c. F-27, ss. 4-7.

[134] *Health of Animals* Regulations, C.R.C., c. 296, ss. 136-159.

Successful prosecutions are featured in bulletins which are posted on the CFIA's website and CFIA compliance and enforcement activities are described in detail in its annual report.

In 2002-2003, the CFIA conducted 347 active investigations under five statutes including the *Meat Inspection Act* (Canada), the *Fish Inspection Act* (Canada) and the *Food and Drugs Act*. The 86 prosecutions it undertook resulted in convictions on 93 counts and fines totalling $212,300.[135]

11.3.4.3.2 Comments

The development of a comprehensive compliance, investigations and enforcement policy, posting of information concerning successful prosecutions and an annual performance report are all areas which OMAF should emulate and which I have recommended. In addition, the FSIEB should communicate regularly and formally with the CFIA. A sharing of experiences and practices will not only be useful in identifying instances where cooperative action may be necessary and appropriate but also in ensuring that the adequacy of established policies and procedures is regularly evaluated and improvements made.

All OMAF[136] personnel should be encouraged to promptly report to the CFIA instances of non-compliant conduct which appear to be within CFIA's jurisdiction including the inhumane transportation of animals and misleading or deceptive practices in respect of meat including false labelling and the adulteration of meat products. CFIA's activities in these areas are an important part of the overall meat regulatory system and should not be ignored.

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[135] CFIA, *Performance Report for the Period Ending March 31, 2003*, available from www.tbs.sct.gc.ca/rma/dpr/02/03/CFIA/acia/CFIA/acia03do1_e.asp [accessed 16 March 2004].

[136] Whether involved in monitoring, compliance or enforcement activities and including the MNR if the contractual relationship continues. Such information could be stored by the intelligence analyst. I was surprised to learn that the MNR was unaware of the theft of federal meat inspection stamps. While the theft was reported in *Meat Inspection Stamps Stolen*, The Toronto Star (18 March 2004), the information had not been communicated by the CFIA to the MNR directly. Yet, such information is of importance to all involved in enforcement activities as illustrated in August and September 2003. See R. Cribb, *Ottawa probes federal labels at meat plant*, The Toronto Star (3 September 2003).

11.3.5 Information Management

The information systems utilized by those involved in the investigation and enforcement of meat safety laws is fragmented.

OMAF has developed, implemented and frequently improved a computer software system known as the Food Safety Decision Support System (FSDSS) which contains a large volume of information concerning licensees and their activities. While information generated during monitoring activities is maintained, it appears from my review that limited entries are made relating to enforcement. In fact, compliance and advisory officers and the dead stock disposal advisor do not have a method to store their activities and reports in the FSDSS. While OMAF agreed to give MNR investigators access to the FSDSS on a read-only basis, that has not yet occurred.

The MNR utilizes a computer software system known as the Compliance Activity and Violation Reporting Service (CAVRS). Information contained in CAVRS is inputted by the MNR from the time of receipt from OMAF until completion. It is not linked to or otherwise accessible by any OMAF employee with the exception of the EALO. I was advised during the course of the Review that the EALO has not made use of CAVRS. No existing provincial-wide system is used consistently by all public health units. The Food Premises Inspection Information System and the computerized inspection services system implemented and utilized by the MOHLTC is, itself, fragmented and not accessible to all local public health units. Each public health unit maintains its own electronic information system and the data entered with respect to monitoring, compliance and enforcement activities varies widely. The public health systems are not accessible by either OMAF or the MNR.

The protection of confidentiality should not hinder the vital communication of data in the food safety context. Material provided to me has evidenced that OMAF and local health units have exchanged information with respect to complaints of non-compliant conduct, but those efforts have not been facilitated by any shared information system. Further, province-wide initiatives are needed.

Delivery of compliance and enforcement services should be supported by an integrated, province-wide information system accessible by all personnel involved in that endeavour. The necessity of approaching the problem of identifying, preventing or containing activity at the earliest possible moment cannot be overemphasized. The problems which unwholesome product or improper practices spawn are not confined to one locale. Meat and meat products may be widely distributed and create serious harm in distant locations. It is essential that there be linkages between enforcement bodies to ensure that relevant information is collected, stored and accessible by those who may be dealing with the results of non-compliance in many areas.

I recommend that the provincial government develop an integrated province-wide information system to support food safety compliance, investigation and enforcement services.

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Chapter 12 - Role of Communication in Meat Safety

12.1 Introduction

No government should need reminding today that the failure to be open and honest with the public leads to mistrust and an erosion of public confidence. Disclosure is particularly important with information concerning something as fundamental as food safety.

12.2 Communication Concerns

At my request, a paper was prepared for the Review addressing the media's impact on public perception and policy development, particularly as it relates to meat inspection and regulation in Ontario.[1]

In the paper, the authors analyzed the media's reporting of the August 2003 recall of products from Aylmer Meat Packers Inc. (AMP) with particular focus on the performance of public authorities, including the provincial government. The authors noted that public communications by the provincial government came from several spokespersons from various ministries, provided limited and somewhat contradictory information and attempted to deflect responsibility for responding to the recall. The authors suggest that the problem with the provincial government's communications during the AMP recall included:

- inaccurate, contradictory and incomplete information, especially in the initial stages;
- constantly changing information; and
- a breakdown of normal channels of communication.

The authors noted that an information vacuum throughout the crisis resulted in suspicion and confusion which, in turn, damaged consumer and business confidence.

The paper also included a discussion of the consequences of a month-long failure of the Belgian government to disclose to the public that dioxin had entered the food chain through animal feed. The authors conclude that the failure to inform the public promptly resulted in accusations of a cover-up. The government's crisis management and communication strategy became the focus of criticism and damaged public confidence in both the food system and the government.

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[1] D. Powell et al., *The impact of media on public perception and policy development related to meat inspection in Ontario* (June 2004), [hereinafter the Powell Report]

The AMP and Belgian incidents demonstrate that responsible management of a crisis not only requires timely action to reduce and mitigate risks to public health, but also includes the prompt and accurate disclosure of its nature. Otherwise, the public will assume the worst.[2] The authors of the media paper make the following observations:

> *The Aylmer incident and the Belgian dioxin crisis illustrate many common mistakes in crisis communication. Lack of prompt communication with the media, even when there isn't very much information available, or appearing defensive, may lead media and critics to assume the organization is denying or downplaying the existence of a problem. Failure to address the perceived problem, no matter how large the problem actually is, may result in the public turning against the organization. The organization will be criticized throughout the crisis and trust and credibility will be very difficult to regain. If the organization does not create its own message on its own terms about the real issues at stake, another message will be created by others, perhaps with a vested interest, which may or may not be truthful. The result is confusion and contradiction between the organization and the media throughout the crisis.*[3]

In Ontario and Belgium, failure to appreciate these principles at the outset resulted in a focus on government mismanagement and public concern about food safety, rather than on the issues that gave rise to the food safety incident. Steps should be taken to avoid such a result in the future.

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[2] *Ibid.*, p. 22 & 23.

[3] *Ibid.*, p. 23; V. Covello, *Risk Communication Paper, Opening the Black Box Risk Conference*, McMaster University (1995).

12.3 An Informed Public

Our governments play an important role in providing information and education to the public on food safety related issues. This process is not restricted to formal education and training strategies, but rather extends to all communications by the provincial government including those during a crisis or in consultations during policy development.[4]

If the government provides regular, consistent and accurate messages in its communication with the public, there is a strong likelihood that the public will understand food safety related risks and issues. The messages should be consistent as between all government agencies – agriculture, food and health. Some of the key messages the provincial government should communicate include:

- meat in Ontario is produced according to appropriate standards of food safety and has been subject to a reasonable level of inspection and testing;
- the safety of meat can be safeguarded by ensuring that it is produced and handled by workers who are appropriately trained and supervised;
- the safety of meat can be enhanced by a well-trained inspectorate;
- the safety of meat can be assured by appropriate preparation and handling by consumers;
- consumers should make informed choices in terms of where they buy their meat and how they handle, prepare and store their meat;
- essential to the safety of our meat is the provision of appropriate resources by the provincial government;
- essential to the safety of our meat is a good science and research capability and a strong and effective regulatory system;
- the food safety system must be under constant review and scrutiny in order to respond to new challenges; and

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[4] The issues relating to formal education and information programs for the public are reviewed in Chapter 10.

- foodborne illnesses remain a significant public health concern and a good food safety system will help reduce illness, resulting in significant economic and non-economic benefits.

An informed public, through consistent, repeated and regular communication, is the foundation for developing good food safety policy and responding to a crisis in a measured and responsible manner.

12.4 Food Safety Policy Development

As noted in Chapter 3 of this Report, in recent years, the provincial government has failed to adequately articulate its vision, strategies and plans for food safety. It has failed to communicate to the public that it has developed specific plans and undertaken initiatives to improve food safety. The provincial government expended large sums of money for these purposes without publicly reporting on how they were being spent, and mysteriously, has not provided information to the public about much of the good work and systemic improvements which have already been accomplished.

The Ministry of Agriculture and Food (OMAF) has participated in consultative communications with the industry and stakeholders with respect to proposed changes to the food safety programs over the last five years.[5] However, a number of submissions to the Review expressed a desire for more regular communication by and dialogue with OMAF regarding the development of regulations and policies, as well as other food safety initiatives.[6]

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[5] Examples of the consultation include the following. Consultation papers were developed and sent to industry and other stakeholders prior to the introduction of the *Food Safety and Quality Act, 2001* and changes to the livestock community sales program. OMAF consulted industry during studies regarding the deadstock industry, the non-federally registered fish processors and the costs to upgrade plants. The consultations with respect to the *Food Safety and Quality Act, 2001* in 2001 detailed proposed changes to the system which have not yet been implemented as the Act has not yet been proclaimed and some of the concern expressed was whether those changes communicated at that time and evidenced by that Act are still planned or whether different changes are planned.

[6] For example, the Ontario Independent Meat Processors and a number of public health organizations.

The development of food safety policy by the provincial government is influenced by good science and by social and economic factors including public opinion and the public's willingness to see limited resources allocated to food safety initiatives. In order to provide a world-class food safety system, the provincial government must candidly communicate to all stakeholders, in a timely manner. The communication must clearly articulate the province's vision and goals for its food safety system, the current shortfalls in the system and steps that are planned to remedy them.

The development of policy also requires the undertaking of risk analysis which includes risk communication. Effective communication of information and opinion on risks associated with real or perceived hazards in food is an integral component of the risk analysis process required in the development of food safety policy. It is not an option; it is an essential element.

The fundamental goal of risk communication is more widely understood and accepted risk management decisions. This requires that the government engage in the exchange of meaningful, relevant and accurate information, in clear and understandable terms with a specific audience in mind. The information is provided so that government, industry and the public can make informed choices about the risks involved in undertaking certain activities. Effective risk communication should endeavour to build and maintain trust and confidence. It should facilitate a higher degree of consensus and support by all interested parties for the risk management options being proposed.[7] Building trust and managing the public's perception of risk is a challenge for any government.

Risk communications should inform thinking throughout the risk analysis process and to do so, it needs to be an interactive process.[8] It should apply to the full range of government activities, including the development of policy and regulations, program implementation and evaluation, research and analysis, and enforcement and compliance efforts.

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[7] Powell Report, *supra* note 1, p. 7; J. Chartier and S. Gabler, CFIA, *Risk Communication and Government; Theory and Application for the Canadian Food Inspection Agency*, (2001), available from http://www.inspection.gc.ca/english/corpaffr/publications/riscomm/riscomm_ese.shtml

[8] J. Chartier and S. Gabler, CFIA, *Risk Communication and Government; Theory and Application for the Canadian Food Inspection Agency, supra* note 7, Ch. 2; See also discussion of risk analysis in Chapter 3 of this Report.

The media's wide reach and influence on public perception make it an important vehicle for risk communication.[9] While many think of the media as narrators of events such as foodborne illness outbreaks, food recalls, health advisories and food warnings, their role is far greater. The media is a powerful vehicle for the delivery of health risk information and advice to the public. This communication can be positive and effective if clear, accurate, balanced and complete or damaging if the communication is confusing, biased, inaccurate or incomplete. If the information from the government is stale, incomplete or inaccurate, there is a substantial risk that the media's message will be distorted or incomplete and negatively impact the development of food safety public policy.[10]

For these reasons, it is important that the provincial government and, in particular, all of the ministries involved in food safety have a clear, coordinated communications strategy and protocol to ensure that there is a timely system to provide ongoing information to the media on food safety issues. Good public policy can be made if the public is well informed and is willing to support government initiatives and the associated expenditures of tax dollars.

12.5 Crisis Communication

Communication is especially important in circumstances where an adverse event has occurred or is threatened. In a crisis, there is a danger that the media and the public may stigmatize the hazard and assume that the health risks are more serious and harmful than they are in fact. In addition, the media and the public often become distracted by collateral issues relating to the government's management of the crisis, including issues such as conflicts of interest and the application of proper values and precautions, rather than on the actual level of risk posed by the hazard and what is being done to control it.[11]

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[9] Powell Report, *supra* note 1, p. 7.

[10] *Ibid.*, p. 13 & 14.

Effective communication will help ensure that:

- the incident or event does not rise to the level of a crisis unless warranted by its actual severity;
- the impact of the incident on the public, industry and government is kept to a minimum;
- the provincial government, as a regulator of food safety, establishes control over the incident and any risks associated with it;
- incident-related messages are accurately and quickly transmitted, received, understood and believed;
- the provincial government is accurately perceived as caring, concerned and taking appropriate action to correct the situation; and
- incident-related messages result in meaningful and appropriate actions.[12]

Ineffective communication can:

- raise levels of public anxiety, concern and fear and fuel false rumours;
- result in inaccurate perceptions of risk;
- result in exaggerated allegations and claims;
- result in injury and harm to the public and industry;
- create unfairly negative images of the provincial government; and
- result in loss of public confidence in the safety of our food.[13]

The public expects government to be ready to respond appropriately to any emergency or crisis. Communication is an important part of the response expected in a time of potential crisis. Several stakeholders suggested that the provincial government did not have or use a good communication strategy during recent meat safety events. The news reports of those events appear to support their contention.

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[11] *Ibid.*, p. 10.

[12] *Ibid.*, p. 11; V. Covello, *Risk Communication Paper, Opening the Black Box Risk Conference, supra* note 3.

[13] *Ibid.*

The *Interim Report of the SARS Commission* has identified Ontario's lack of public health communication strategy as a problem.[14] Justice Campbell notes, and I believe correctly, that a public health crisis creates a strong demand for credible public information.[15] Meat safety is, of course, an important public health concern.

A potential crisis related to meat safety will likely involve many different government agencies including OMAF, the Ministry of Health and Long-Term Care, the Ministry of Natural Resources, Boards of Health, the Canadian Food Inspection Agency, and Health Canada, each with roles and responsibilities which may overlap. There is a need for government to communicate to the public in a clear and coordinated fashion,[16] despite any overlapping jurisdiction.

Measures should be put in place to ensure that the public is provided with timely, complete, consistent and accurate information. One government agency should take responsibility for communicating with the public in each incident and all government authorities involved in managing meat safety incidents should include, within their emergency preparedness plans, a clear communication strategy and protocol.

The meat safety system in Ontario will be the better for it.

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[14] Ontario, *The SARS Commission Interim Report: SARS and Public Health in Ontario* (15 April 2004) p. 56.

[15] *Ibid.*, p. 58.

[16] Powell Report, *supra* note 1.

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Chapter 13 - Reconciling the Provincial and Federal Systems

13.1 Introduction

Why are there two meat inspection systems in Ontario? The short answer is because the Constitution permits both federal and provincial governments to legislate in this field.[1] The two systems we have today represent the exercise of that constitutional jurisdiction by both governments, but at different times and for different reasons.

In 1906, the government of the United States enacted meat inspection legislation as a response, in part, to the publication of *The Jungle*, by Upton Sinclair, that exposed the revolting practices and horrendous working conditions at Chicago packing houses. In order to preserve its trading status with the United States and Europe, Canada responded in 1907 with the *Meat and Canned Goods Act*[2] which provided for the inspection of all meat sold interprovincially or internationally. Although there was legislation that permitted meat inspection in certain municipalities in Ontario as early as 1896, it was not until the 1960s that the provincial government, prompted by prosecutions relating to the sale of meat from dead animals, enacted legislation that provided for meat inspection, licensing of abattoirs and regulation of deadstock disposal.[3]

The progress and development of the federal system over the years has been driven by trade considerations. As a result of its success in keeping pace with international developments in food safety, the federal system is considered to be the equal of any food inspection system in the world.

13.2 The Differences in the Systems

Since part of my mandate is to consider strategies for accelerating harmonization with the federal government, it is necessary to identify the differences between the two systems in order to assess the need for such action and, if required, the direction it should take.

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[1] See Chapter 2.

[2] 6-7 Edward VII, c. 27.

[3] *Meat Inspection Act* (Ontario), S.O. 1962-63, c. 78 and *Dead Animal Disposal Act*, S.O. 1960, c. 21.

I was told by those I spoke to in government and the meat industry that the difference between the two systems is one of scale and scope, not safety. The difference in scale and scope is easily enough demonstrated. There are only 33 registered federal abattoirs in the province yet they process 85% of the livestock. On the other hand, there are 191 provincially licensed abattoirs which account for only 15% of the slaughter. With some exceptions, provincial abattoirs are small, family run businesses located throughout rural Ontario. Forcing all abattoirs to be federally registered would put many out of business. For example, most provincial plants could not meet the construction requirements for federal plants. If they wished to remain in business, they would have to raze their premises and start anew. However, the fact that such a capital investment would be prohibitive for most is, itself, no justification for supporting a system that is less safe than its federal counterpart. The issue, therefore, is whether provincial plants, properly operated and regulated, produce meat which the Ontario consumer can purchase with the same level of confidence as meat produced in the federal system.

In fact, there is objective evidence to demonstrate that provincial abattoirs in Ontario already compare favourably with their counterparts elsewhere. As noted earlier in this Report,[4] three microbiological baseline studies have been conducted with respect to raw meat originating from Ontario abattoirs. Although no federal data is available for comparison, the results from these studies show that meat processed in Ontario's provincially licensed abattoirs is similar, in microbial quantity, to meat processed in facilities in other jurisdictions, including the U.S. and the U.K. Indeed, in some instances, Ontario pathogen levels were lower than in these other jurisdictions.

Apart from differences in construction standards, the other significant difference between the two systems is the availability of a veterinary inspector at every federal facility. Although federal meat inspectors still conduct the *ante* and *post mortem* examinations, a veterinarian is usually on-site to examine any animal or carcass that the inspector identifies as abnormal. In the provincial system, advice is available by telephone from the veterinary scientist or regional veterinarian and an appointed veterinarian can be called to the plant to examine an animal or carcass. I initially perceived this to be a weakness in the provincial system, but am now satisfied it is not. Apart from the fact that an on-site veterinarian is necessary to comply with international trade requirements, the size of federal plants and the volumes of animals being processed dictate the need for ready access to a veterinarian and make it economically practicable. This is not the case in most provincially licensed plants. Many only slaughter one or two days a week and the volume is comparatively low. The attendance of an on-site veterinarian would be prohibitively expensive and unnecessary as their services are only required infrequently. When a provincial meat hygiene officer identifies a problem which requires the attention of a veterinarian, the animal or carcass is held pending receipt of the necessary advice. No decision is made concerning the disposition of the animal or carcass until such advice is obtained. So long as veterinary advice is readily available to the inspectors, I do not see that the absence of a veterinarian on-site renders the provincial system any less safe than the federal system.

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[4] See Chapter 3.

13.3 The Need for Local Abattoirs

If the federal system was imposed on provincially licensed abattoirs, not only would many operators have to close their doors, but a significant segment of the agricultural economy which relies on local abattoirs would suffer.

As indicated earlier in this Report,[5] lamb and veal producers rely on the provincial system almost exclusively for the slaughter of their animals as well as virtually all of the growing niche markets.[6] Many farmers who depend on provincially licensed abattoirs for custom slaughter offer compelling arguments in support of the preservation of local abattoirs. The representative of the National Farmers Union made the following plea at the Review's public meeting in London:[7]

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[5] See Chapter 1.

[6] Including bison, farmed deer and elk, ostrich, emu, ducks, geese, partridge, Cornish hens and wild boars.

> *Small, local, inspected abattoirs are an essential part of a diverse farm culture and local food system. Farm families, consumers and rural economies all benefit when farmers sell meat directly to the public in their home communities. Farmers selling meat direct to consumers, or to small butcher shops, make more per animal than through regular livestock market channels, thereby receiving a fair return on time and investment. Without local abattoirs to kill, cut and package meat, it is impossible for farmers to direct market their meat.*

One farmer explained his family's concerns in this way:

> *We market our beef by the piece, side or quarter to people who know us, either directly to individuals or to retailers such as health food stores and restaurants. You can understand that issues of quality, and in particular food safety, are extremely important to us.*
>
> *Our existence, however, is totally dependant on the services provided by small, local abattoirs. "Small" is critical to ensure that our product is not contaminated with or identified as other beef; "local" is important because longer travel distances result in increased stress on animals and impact negatively on carcass quality.*

In my view, there is no need to sacrifice this sector of the provincial economy in order to secure a safe supply of meat. If the recommendations in this Report are adopted and implemented, the people of Ontario can be confident that the meat produced in provincially licensed plants is as safe as any produced in a federally registered facility.

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[7] The National Farmers Union was supported in this submission by the Ontario Cattlemen's Association, Ontario Sheep Marketing Agency, Ontario Pork Producers' Marketing Board, Chicken Farmers of Ontario, Turkey Farmers of Ontario, Ontario Veal Association and the Ontario Federation of Agriculture.

13.4 Harmonization

It will be evident from reading this Report that all levels of government are engaged in food safety initiatives at every stage along the farm to fork continuum. Part of my mandate in conducting this Review was to "make recommendations on approaches to strengthen regulatory and legislative systems, including strategies for accelerating harmonization with the federal government." I have explained why we have two systems and why I think the people of Ontario are well-served by maintaining two systems. At the same time, I also believe that the adoption of my recommendations will bring the standards and practices of those systems into harmony.

The proclamation of the *Food Safety and Quality Act, 2001* (*FSQA*) will provide the legislative structure that is necessary to achieve that goal, and regulations that are consistent with the National Meat and Poultry Regulations and Code (NMPRC) will establish standards that are comparable to those in place for the federal system. The introduction of HACCP-based programs all along the farm to fork continuum will ensure good practices and proper standards are observed and maintained. The specific policies I have recommended with respect to issues such as on-farm slaughter and the treatment and processing of downer animals should address specific safety concerns raised by animal welfare advocates and consumers. The training initiatives I have recommended for meat hygiene officers together with the increase in operational and veterinary support will ensure that the Ontario public will be served by an experienced and competent inspectorate capable of ensuring that the high standards being set are observed. The movement toward harmonization will produce joint training opportunities and more efficient use of scientific resources. It will also facilitate the implementation of coordinated efforts regarding disease surveillance, traceability and biosecurity which are essential to any food safety system.

But, as was so often observed during the course of the Review, there will always be those who, for expedience or profit, will ignore the rules and put others at risk. The system must, therefore, have the enforcement capacity to detect and deter potential offenders. The *FSQA* will provide the additional tools required, however, compliance and enforcement must be sufficiently resourced to give them a proactive capacity they do not currently enjoy. Properly funded and staffed, the proposed restructured enforcement branch of the Food Safety Division will be able to deliver that capability as effectively as the CFIA enforces practices and standards in the federal system.

13.5 Food for Thought – An "OFIA"

I have identified certain gaps and duplications in the delivery of food inspection services in Ontario and have suggested ways to eliminate them. However, jurisdiction over inspection services continues to reside in two separate ministries. OMAF is responsible for seeing meat safely to market and MOHLTC has responsibility for its safe delivery to consumers. I am satisfied that this system, with the adjustments I have recommended, will provide the people of Ontario with reliable and effective meat inspection. Nonetheless, I was drawn, from the outset, to the idea of a single agency responsible for all food inspection from production through to consumption. Indeed, the creation of the Food Safety Division at OMAF that I have recommended would be a step in that direction.

The CFIA was born out of efforts to coordinate and rationalize federal food inspection services. The logistical challenges faced by the federal government were perhaps larger in scope, but very similar in kind to those we are now addressing in Ontario. Provincial food inspection services in Québec are undertaken by the Centre québécois d'inspection des aliments et de santé animale (CQIASA). This agency was established in 2001 and is, in many respects, Québec's equivalent of the CFIA. The creation of a food inspection agency, with responsibility for all aspects of food inspection is, in my view, the next logical organizational step in the process of modernizing the food safety system in Ontario and would greatly facilitate the process of harmonization with the federal government.

I recommend that the provincial government consider the establishment of an Ontario food inspection agency that would assume responsibility for all activities associated with ensuring food safety.

In pursuing this recommendation, it will be necessary to examine and consider the respective roles to be played by OMAF and MOHLTC. The provincial government will have to decide which Ministry the agency will report to and which Ministry will be responsible for establishing food safety policies and standards. It is noted that the CFIA reports to the Minister of Agriculture and Agri-Food Canada while the Minister of Health establishes standards for the safety and nutritional quality of food sold in Canada. A similar structure in Ontario would require some adjustment to the current roles and responsibilities of OMAF and MOHLTC, although it seems to me that OMAF is best positioned to direct the operational aspects of such an agency whereas MOHLTC should be charged with setting the standards necessary to protect public health.

I do not make this recommendation as an alternative to the many that precede it, but see it, rather, as the next step in the progression of events that the balance of the recommendations represent.

13.6 Interprovincial Trade

Many provincially licensed abattoirs believe their facilities are already operating to a standard that is the equivalent of federally registered plants and believe they should be permitted access to markets in other provinces. Although an amendment to current federal legislation would be required, it is my view that the implementation of my recommendations should bring interested operators closer to realizing this goal and perhaps lead to an equivalency certification that would acknowledge harmonization of the systems and permit certified operators to trade interprovincially without federal registration. The provincial government should be prepared to advocate this position and work with the federal government and other provinces to pursue this goal.

13.7 Implementation Audit

When this Review was announced, the provincial government made a commitment to act on the recommendations. As noted in the Report, much has been undertaken to put Ontario on the road to a modern and science-based food safety system, but there is more to be done. In order to ensure that the momentum is maintained, a review or audit should be conducted within a reasonable time to assess and report on the progress that has been made.

I recommend that the provincial government ensure an independent audit is undertaken after one year to assess and report publicly on the progress of the implementation of the recommendations in this Report.

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Chapter 14 - Process of the Review

14.1 Introduction

This was an independent review authorized by Order-in-Council. It was not a public inquiry. I had no authority to compel the attendance of witnesses or the production of documents. The mandate required me to review and consider the regulatory regime for the production of meat in Ontario and in doing so simply provided that I could "request any person to provide information or records . . . and hold public and/or private meetings."

14.2 Participation by Ontario Government Employees

The Order in Council directed all government ministries to assist me "to the fullest extent" and the employees at the Ministry of Agriculture and Food (OMAF), the Ministry of Health and Long-Term Care (MOHLTC) and the Ministry of Natural Resources (MNR) were all encouraged to participate in the process through memoranda issued by their respective deputy ministers. The staff of those ministries were assured that their co-operation, "absent any wrongdoing" would not result in any negative disciplinary repercussions. However, many of the meat inspectors expressed concerns about the effectiveness of this protection and through the auspices of the Ontario Public Service Employees Union obtained a clarification which provides that "no adverse employment action will be taken against any employee or any contractor, because that person, acting in good faith, makes representations to or discloses evidence to the Meat Inspection Review."[1]

In my view, the fact this exercise was required highlights the need for legislation of general application that provides such protection. The principal concern is the public interest. At no time should anyone in the public service who identifies a public health risk be deterred from disclosing that information in good faith because adverse employment consequences could ensue.

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[1] We needed a name by which we could be identified and settled on Meat Inspection Review early on although the meat regulatory and inspection regimes encompass much more than meat inspection.

In the opening paragraph of its recent report to the President of the Privy Council for Canada, the Working Group on the Disclosure of Wrongdoing makes the following statement which I endorse:

> *An effective regime for the identification, disclosure and correction of wrongdoing . . . provides public servants with the tools and support they need to reveal and correct instances where conduct and decision-making fall short of the high standards expected in public institutions. In addition, a trusted disclosure regime can make a significant contribution to public service morale and conduct, and to public confidence in government.*[2]

As it turns out, there is such protection for public servants in Part IV of the *Public Service Act*[3] that was passed by the Legislature in 1993, but never proclaimed.

I recommend that the provincial government consider enacting legislation to provide "whistle blower" protection for public servants akin to that provided for in the unproclaimed Part IV of the *Public Service Act*.

14.3 Time Line

When I was initially approached to conduct this Review, the time allotted for its completion was the subject of some discussion. It was difficult to estimate the time required for a task which was essentially investigative in nature and for which no procedural process had been established. Although I was assured the government of Ontario was committed to acting on the recommendations and anxious to have a report as soon as possible, I, of course, needed to be sure that there was sufficient time to do a credible job. The date we settled on was April 30, 2004 with a provision that this date could be extended. By early March, it became apparent that the April 30 deadline was not achievable and, at my request, it was extended to June 30, 2004.

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[2] Government of Canada, *Report of the Working Group on Disclosure of Wrongdoing*, 2003.

[3] S.O 1993, c. 38 (not proclaimed).

14.4 Procedure

Once authorized to proceed, it was up to me to decide on the process, subject, of course, to the limits prescribed by the Order in Council. I was fortunate to be able to retain counsel almost immediately and together we settled on the approach we would take.

The first step was clear. I needed to identify the stakeholders and invite their participation. Apart from the various ministries, health units and relevant government agencies, our list of 366 included all of the licensed abattoirs, deadstock collectors, receiving and rendering plant operators, livestock associations, animal welfare groups and retail associations. I then corresponded with these many individuals and groups requesting their submissions and established a website to post information as the Review progressed.

The purpose of this Review is to strengthen public health and safety and business confidence. In order for the report to be worthy of the public's confidence, the process had to be open, fair and thorough. At the outset, I was concerned that it would be a challenge to achieve these goals given the time frame and procedural limitations of the mandate. On the other hand, without the sceptre of fault looming in the background, I thought this process could perhaps provide a platform for a more co-operative and constructive discussion of the issues relating to meat safety and I believe that has occurred.

14.5 Consultations

14.5.1 Private Meetings

Once we had reviewed and considered the relevant legislation and regulations, we embarked on an extensive and very productive series of meetings with key personnel at OMAF, MOHLTC and MNR as well as representatives from the many stakeholder organizations that responded to our request for input. We also met with numerous individuals who were involved in the meat industry in various capacities and who had information, concerns and insights to share with us. I am grateful to all of those to whom we spoke. Every meeting was worthwhile and no one who requested a private meeting was refused.

14.5.2 Public Meetings

Although there was no provision in the terms of reference for the calling of witnesses, I thought it important to provide a forum for those interested in speaking publicly about the issues I was being asked to address. As a result, arrangements were made for two days of public meetings. The first was held in Peterborough on March 24, 2004 and the second, one week later, in London. The notices of the meetings that were published in advance asked interested parties to provide us with their submissions in writing and estimate the time they would require so that we could ensure that all who attended and wished to speak were given the opportunity. The meetings were a resounding success. Not only were the presentations helpful to me, but the meetings gave those with competing interests an opportunity to hear and consider a variety of perspectives. I heard 17 presentations in Peterborough and 16 in London. I am grateful to all of those who prepared submissions and attended to present their views.

The public meetings were recorded and verbatim transcripts of the proceedings posted on the Review's website.[4]

14.5.3 Tours

I was persuaded that I would not be able to properly apprehend the task before me without witnessing the various operations that constitute the meat industry. As a result, the Review staff and I toured the following facilities:

Norwich Packers Limited
Thames Road Country Meats
Metzger Farms Meat Market
T. & R. Sargent Farms Limited
Better Beef Limited
Weston Abattoir Limited
Bellwood Poultry Limited

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[4] See Appendices L and M.

Springer's Meats and Deli
Laziz Meat and Deli
Gietl's Fine European Meats and Sausages
Sikorski Sausages Company Limited
Central By-Products and Oxford Dead Stock Removal Limited
Ontario Livestock Exchange Inc.
Denfield Livestock Sales Ltd.

At most locations, we met with the owners or managers of the particular businesses who patiently responded to our many inquiries. I am indebted to each of them.

Prior to my appointment to conduct this Review, I had not been inside a slaughterhouse. It was one of life's experiences that I had been prepared to forego; something I suspect I shared with any number of others. For me, at least, it was easy to make the direct transition from cattle in the field to beef in the supermarket. I really did not give much thought to the steps in between. These tours, then, were very instructive. Not only did I learn how meat was produced, but I also witnessed the reality of it - from the 1,500 head of cattle processed each day in the highly mechanized environment of Better Beef Limited in Guelph to the kill floor at Thames Road Country Meats in Huron County where the owner and one employee were processing one of only a few animals slaughtered in that facility each week. There was no better way for me to appreciate the crisis in the deadstock industry than to witness the piles of dead calves at Oxford Deadstock Removal Limited and to listen to the owners explain with frustration the challenges facing their industry. Nor could I have properly understood the processes of curing, smoking and fermenting and the reasons for a comprehensive system of inspection for free standing meat processing plants without the benefit of the education provided at Springer's Meats and Deli and Metzger Farms Meat Market.

14.6 Expert Advisory Panel

The modern approach to food safety is science-based and expert advice was required to assist me in assessing the effectiveness of the current regulatory regime and in considering measures for strengthening it. In selecting members of the panel, I attempted to ensure the group would reflect the necessary diversity of experience and perspective that was required. I am indebted to the co-chairs of the panel for their guidance in the selection process.

When the panel was first constituted, the issues that we believed had to be addressed were identified and a strategy devised to facilitate their consultations. The plan of action had each member of the panel contributing his particular expertise to a collective effort that would result in a report to me from the panel addressing the pertinent scientific issues. In order to bring further experience and perspective to bear, the panel determined that the report, once drafted, should be circulated to other public health and food safety specialists for their review. To this end, a one-day conference was convened in Toronto with myself, the Review staff, the panel and the invited reviewers in attendance for the purpose of discussing the conclusions and proposals in the panel's preliminary report. Finally, with the benefit of these additional views, the panel completed its report and submitted it to the Review with its recommendations.

The panel consisted of the following individuals:

Ronald L. Doering, B.A., LL.B., M.A., LL.D., (Co-chair), is the former President of the Canadian Food Inspection Agency (CFIA) and now practices law with the Government Relations and Regulatory Affairs Group in the Ottawa offices of Gowling Lafleur Henderson LLP where his practice is primarily in the areas of agriculture and food law, environmental law and public health law and policy. He has over 30 years experience in law and public administration. Before joining Gowlings, he held a number of senior positions in the federal government. He has written and lectured widely on law and public policy, most recently on environmental regulations, food safety, biotechnology regulations, and regulatory reform and risk management. He is an adjunct Professor, Ontario Agricultural College, University of Guelph.

Scott McEwen, D.V.M., D.V.Sc., Diplomate A.C.V.P., (Co-chair), is a Professor in the Department of Population Medicine, Ontario Veterinary College, University of Guelph. His research focuses on the epidemiology of foodborne infections in food animal populations, particularly *E. coli*, antimicrobial resistant organisms, *Salmonella* and other pathogens, as well as risk factors of foodborne illness in humans. Since 1986, Dr. McEwen has taught food safety and advised over 25 graduate students. He has authored over 95 scientific journal publications. He consults on food safety, antimicrobial resistance, epidemiology and other veterinary public health matters with governmental and non-governmental organizations in North America and Europe, notably various food animal industry groups, Health Canada, the Alliance for the Prudent Use of Antibiotics, the United States Food and Drug Administration, and the World Health Organization.

Robert Clarke, B.Sc., D.V.M., Ph.D., is currently a Visiting Professor of Epidemiology and Community Medicine in the Faculty of Medicine, University of Ottawa. He also serves as the Executive Director of the McLaughlin Centre for Population Health Risk Assessment, Institute of Population Health. Prior to joining the University of Ottawa, Dr. Clarke was Executive Director of Laboratories for the CFIA. In this position, he was responsible for one of the largest national laboratory systems in Canada, comprising over 800 personnel at 16 sites. In previous positions, Dr. Clarke managed scientific programs at Health Canada, and Agriculture and Agri-Food Canada. He obtained his Doctor of Veterinary Medicine degree in 1976 and a Ph.D. in Veterinary Microbiology in 1985.

Mansel Griffiths, B.Sc., Ph.D., holds an Industrial Research Chair in Dairy Microbiology in the Food Science Department, University of Guelph. He is Program Chair for the Masters of Science in Food Safety and Quality Assurance and is the Director of the Canadian Research Institute for Food Safety, a research collaboration between the federal and provincial governments and the University of Guelph. His research includes rapid detection of foodborne pathogens, growth and survival of microorganisms in foods, and beneficial uses of microorganisms. Dr Griffiths has authored over 200 articles and supervised 35 graduate theses. He serves on editorial boards of national and international food science journals. He is a member of the International Dairy Federation working group on milk-borne pathogens and the Expert Scientific Advisory Committee for Dairy Farmers of Canada.

David McEwen, D.V.M., is President of McEwen Agri-Consulting Inc., consultants to the agriculture and food sectors. He has extensive experience in federal and provincial regulatory agencies. Since founding the company six years ago, he has worked with food safety systems from a planning, development and maintenance perspective in a variety of industries. His experience includes 15 years with the CFIA, in both Meat Hygiene and Animal Health. More recently, Dr. McEwen has conducted audits in provincial abattoirs and assisted OMAF with changes in community sales and deadstock programs. He has provided HACCP guidance to both governments and industry, including the meat-processing sector and on-farm programs (Canadian On-Farm Food Safety Program). Prior to joining CFIA, he operated a veterinary practice for a number of years.

Graham Pollett, M.D., M.H.Sc., FRCPC, FACPM, is Medical Officer of Health and Chief Executive Officer for the Middlesex-London Health Unit. He has over twenty years of rural and urban public health experience, having served in the past as Medical Officer of Health for the Region of Halton and the City of North York. A graduate of Dalhousie University Medical School, Dr. Pollett completed a residency in community medicine at the University of Toronto. He was Director of the Community Medicine Residency Program at the University of Toronto from 1989 to 1991. Dr. Pollett is Adjunct Professor in the Departments of Family Medicine and Epidemiology and Biostatistics, University of Western Ontario.

Douglas Powell, B.Sc., Ph.D., is currently an Associate Professor in the Department of Plant Agriculture, University of Guelph, and Director of the Food Safety Network, where he leads a diverse research team that integrates scientific knowledge with public perceptions to garner the benefits of a particular agricultural technology or product while managing and mitigating identified risks. Dr. Powell completed his PhD in Food Science in 1996, applying risk communication theory to issues of food safety and agricultural biotechnology. Dr. Powell is a consultant for industry and government, is a frequent speaker on public issues of science and society, and continues to work as a freelance journalist. McGill-Queen's University Press published his first book, *Mad Cows and Mother's Milk* , co-authored with Bill Leiss, in 1997.

W. Ronald Usborne B.Sc., M.Sc. Ph.D., P.Ag., is Vice-President of Quality Assurance, Food Safety, and Technical Services, Caravelle Foods, Brampton Ontario. Previously, he was a Professor of Animal Science/Food Science and Chair of the Department of Food Science, University of Guelph. At Caravelle Foods, he has advised raw material suppliers on applying HACCP–based food safety programs and humane handling in their slaughter and boning operations. The Ontario Food Protection Association and the Canadian Meat Council recognized Dr. Usborne for his technical contributions to food safety and the advancement of meat science and service. The Ontario Independent Meat Processors awarded him a lifetime membership in 1996. He currently serves on academic, government, and industry advisory boards, committees, and councils.

The panel was ably supported and assisted by:

Richard Arsenault, D.V.M., is currently completing a M.Sc. in veterinary epidemiology in the Department of Population Medicine, University of Guelph, on leave from the CFIA. He is conducting research on *Salmonella* and *Campylobacter* in Ontario broiler chicken flocks. Dr. Arsenault received his Doctor in Veterinary Medicine degree in 1987 and after 2 years of small animal practice, moved to British Columbia to join the federal meat inspection service. He worked in various provincially and federally registered slaughter plants until 1991, when he was promoted to a national headquarters position with the CFIA. Before entering his current graduate program, he was involved in a number of national meat inspection programs, including the Food Safety Enhancement Program, and auditing of federally inspected establishments.

David Pearl, D.V.M., M.Sc., is currently a PhD candidate in the Department of Population Medicine, University of Guelph. Dr. Pearl obtained his DVM from the University of Guelph in 2001. His doctoral research training is being funded through a fellowship from the Canadian Institutes of Health Research. He is studying the epidemiology of *E. coli* O157:H7 among humans in Alberta, and his research integrates the use of spatial statistics, molecular epidemiology, and multi-level modelling for answering epidemiological questions and improving surveillance systems.

His research interests include disease surveillance and the epidemiology of zoonotic and foodborne disease.

A list of those who attended in Toronto to conduct the peer review of the advisory panel's draft report can be found at Appendix O to this Report.

14.7 Research

There was a need for substantial research capacity within the Review. There is a wealth of academic research and government material related to all facets of food safety here and around the world. The Review has, when necessary, had the assistance of those on the expert advisory panel to identify and locate information.

Apart from the research required to properly understand and appreciate the scientific issues, considerable research was required in order to identify and access documentation relating to the several aspects of the current regulatory regime.

As part of our request for documentation from relevant government agencies, I forwarded a questionnaire to each of the thirty-seven health units in order to collect information on the activities of each with respect to the various public health services and programs they were delivering in relation to food safety.

Although I had no power to compel production, and notwithstanding delays encountered as a result of documents being reviewed over concerns of privilege, I am satisfied that we had access to all of the documentation we required in order to fulfill the mandate.

14.8 Acknowledgments

I would like to acknowledge the many people who have contributed to this Report.

First, I wish to thank the extraordinary group of people with whom I have worked over the past six months.

My counsel, Peter Kryworuk, Duncan Grace and Carolyn Brandow for their support and sound advice throughout. Each demonstrated a level of commitment and perserverance I have seldom seen.

Our administrator, Joy Beattie, for the marvellous job she did keeping us all on track and dealing with the mountain of details in the production of the report.

Pat File, our researcher, who, with her legal training, experience in government and current vocation of farming, provided valuable insights on so many issues.

Ryan Sills, who spent the last three months of his articles with us, for his capable assistance to counsel and me.

And, our assistants, Judy Nelles and Sherry Nickles, for their tenacity in dealing with the countless drafts and revisions. Judy's enthusiasm and Sherry's word processing wizardry were both essential to this report making it out the door.

My thanks as well to Peter Rehak, our media consultant, for his able advice and assistance; Albin Kmet, our website developer; Tammy Gooding, our technical advisor; and Honey Design, Marketing & Communications who designed the cover of the Report.

I have mentioned the significance of the tours we took of the various facilities associated with the production of meat. I am grateful to Dr. Robert Hayes of OMAF and Dr. James Christian, an OMAF consultant, who acted as our guides on many of those trips, Richard Barrette of the London-Middlesex Health Unit who accompanied us on others and Doug Rombough of the OSPCA who arranged for the tours of the sales barns.

I would also like to thank all of those who provided us with their written submissions and everyone who appeared and spoke at the public meetings. It was apparent that much thought and effort went into all the presentations.

I greatly appreciate the work of the co-chairs and members of the Expert Advisory Panel and all those who came together to review their preliminary work on March 25, 2004 in Toronto. I was extremely impressed, first with the willingness of everyone to participate and, second, with the dedication of each to public health and food safety. Although the work of our experts was a true team effort, I do want to acknowledge the contributions of Dr. Scott McEwen, who was always available to answer our questions, Dr. Richard Arsenault, who undertook a technical comparison of certain regulations for us and Dr. Douglas Powell who provided us with the paper on the role of the media.

And finally, I wish to acknowledge and thank all of those at the various ministries, agencies, professional associations, commodity groups and industry associations who cooperated so readily in answering our questions and providing us with the information we requested. This review could not have been done without their participation.

Glossary

Abbreviations

BSE – Bovine Spongiform Encephalopathy

CAC – Codex Alimentarius Commission

CCIA – Canadian Cattle Identification Agency

CDC – Centers for Disease Control and Prevention (USA)

CEOSC – Canadian Enteric Outbreak Surveillance Centre

CFIA - Canadian Food Inspection Agency

CFIS - Canadian Food Inspection System

CFISIG – Canadian Food Inspection System Implementation Group

CIPHI – Canadian Institute of Public Health Inspectors

CIPHS – Canadian Integrated Public Health Surveillance

CPFSE – Canadian Partnership for Consumer Food Safety Education

DEFRA – Department for Environment, Food and Rural Affairs (U.K.)

EC – European Commission

EU – European Union

FAO – Food and Agriculture Organization (UN)

FDA – Food and Drug Administration (USA)

FSA – Food Standards Agency

FSDSS - Food Safety Decision Support System (OMAF computer system)

FSEP - Food Safety Enhancement Program (CFIA HACCP based system)

FSIS – Food Safety Inspection Service (USDA)

GMP – Good Manufacturing Practices

HACCP – Hazard Analysis Critical Control Point

iPHIS – National Integrated Public Health Information System (Canada)

MNR – Ministry of Natural Resources (Ontario)

MOE – Ministry of Environment (Ontario)

MOHLTC – Ministry of Health and Long-Term Care (Ontario)

NMPRC – National Meat and Poultry Regulations and Code

OFFS – On-Farm Food Safety

OFSS – Ontario Food Safety Strategy

OIMP – Ontario Independent Meat Processors

OMAF - Ontario Ministry of Agriculture and Food (previously known as OMAFRA)

OPSEU – Ontario Public Service Employees Union

OSPCA – Ontario Society for the Prevention of Cruelty of Animals

OVA – Ontario Veal Association

RDIS – Reportable Disease Information System (Ontario)

SMEs – Small and Medium Sized Enterprises

SOP – Standard Operating Procedures

SRM – Specified Risk Materials

TSE – Transmissible Spongiform Encephalopathies

U.K. – United Kingdom

UN – United Nations

U.S. – United States

USDA – United States Department of Agriculture

VTEC – Verocytotoxin producing *Escherichia coli*

WHO – World Health Organization

Glossary

Definitions

Abattoir – A business at which animals are slaughtered and dressed for human consumption.

Abscess – A localized collection of pus in a cavity formed by the degeneration and necrosis (death) of tissue.

Accreditation – Formal recognition of competence to manage and perform a particular activity.

Adulteration – The addition or inclusion of unclean, unwholesome, inferior, impure or foreign materials to a food product.

Ante mortem – Before death (before slaughter).

Antibacterial drug – An antimicrobial drug that is either chemically synthesized (eg. Sulfamethozine) or made by living organisms (eg. Penicillin).

Antibiotic – An antimicrobial drug made by living organisms (e.g. Penicillin) used therapeutically to inhibit the growth of or destroy bacteria and other microorganisms and as growth promotants in animals.

Anti-microbial drug – A drug which either kills bacteria or slows its growth so the animal's immune system will have time to overcome the disease caused by the bacteria.

Aquaculture – A form of agriculture that involves the propagation, cultivation and marketing of aquatic animals (e.g. fish farms).

Audit - The independent examination of records and activities for a process or quality system, to ensure compliance with established controls, policy, and operational procedures, and to recommend any indicated changes in controls, policy, or procedures. An audit can apply to an entire organization or may be specific to a function, process or production step.

Bacteria – Microscopic, single-celled organisms that multiply in numbers by the division of cells.

Biosecurity – The taking of steps and measures to prevent introduction of a disease or microorganism by way of cross-contamination.

Captive bolt stunner or pistol – An instrument that, when activated, drives a bolt out a barrel for a limited distance. The penetration of the bolt into brain tissues renders an animal unconscious, but does not immediately kill the animal.

Certification – The process of validating performance and/or compliance with the criteria and standards established by the certifying organization for issuing a certificate.

Chill rate – The rate at which a product achieves the desired chill temperature.

Codex Alimentarius Commission (CAC) - A commission set up by the Food and Agriculture Organization (FAO) and World Health Organization (WHO) of the United Nations to develop internationally recognized food standards, guidelines and related text such as codes of practices.

Commodity - A specific agricultural or aquaculture product such as beef, eggs, turkey or salmon.

Commodity groups – Organizations that have formed to represent the producers of a specific commodity.

Communicable disease – A disease that may be transferred to food by an infected person and that remains in the food until someone eats it and becomes ill. **Condemned** – Products or ingredients inspected and determined to be unfit for human consumption.

Contamination – The presence of hazards in the food that can be harmful to humans. Hazards may be biological, chemical or physical in nature.

Control measures - Actions and activities that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Corrective actions - Actions or measures to be taken when the results of monitoring at the CCP indicate the loss of control.

Critical Control Point (CCP) - A point, step or procedure at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Critical limit - The maximum or minimum value to which a biological, chemical or physical hazard must be controlled at a critical control point to prevent or eliminate the food safety hazard or reduce the hazard to an acceptable level.

Cross-contamination – The physical movement, or transfer, of hazards from one person, object, food or place to another.

Cull animals – Animals or birds that are removed from herds or flocks because they are no longer producing or reproducing.

Curing – A process of treating meats with salt, nitrates and /or nitrite salts with or without water.

Custom kill or custom slaughter - The slaughter of animals and provision of basic butchering services of a producer's animal for consumption by the owner's immediate family or farm-gate sales.

Deadstock – Dead animal carcasses.

Deboning – The removal of bones from animal carcasses.

Dioxins - Highly toxic chlorinated compounds that are the by-product of incineration or chlorine bleaching.

Disinfectant – A germicide (chemical agent which kills organisms) applied to objects rather than living animals.

Downer – An animal unable to rise and stand on its own volition due to weakness or injury, and is non-ambulatory, prior to slaughter.

Dressing – The processes used to convert animals into a human food product by cleaning and preparing the meat of the carcass.

Drug Identification Number – A coded number that identifies the product and assures the purchaser that the product is approved by the Government of Canada.

Edible – Any material fit to be eaten or determined after inspection to be safe for eating.

Enteric illnesses – A phrase used to refer to various illnesses typically transmitted by a common source (water, food, or person to person) and entering humans orally.

Epidemiology - The study of the incidence, distribution, and control of disease in populations.

Euthanasia – An induced death that is free of pain and distress.

Eviscerate – Refers generally to the removal of the internal organs or entrails of an animal or bird.

Extension Programs – The provision of on-site assistance and education to operators, such as farmers, offered through agents hired by government or educational institutes, as well as resource materials.

Farm gate sales –Sales of meat that take place right at the farm or direct from the farmer.

Fecal (Feces) – Waste matter from bowels. (i.e. manure)

Fermented meat products – Manufactured ready-to-eat raw meat sausages produced by way of a controlled fermentation process.

Flock sheets – Forms that are used by chicken producers on a per flock or lot basis to record information on feed, medication and other information needed for preventative HACCP-based programs, that are submitted to processors.

Food allergen – A substance in food that causes some individuals to experience an immune system response such as an allergic reaction.

Food continuum - The agri-food system starting with production and ending with consumption by the consumer.

Food premises – A facility where food or milk is manufactured, processed, prepared, stored, handled, displayed, distributed, transported, sold or offered for sale, but does not include a private residence.

Food safety objectives (FSO)_- The maximum frequency and/or concentration of a hazard in a food at the time of consumption that provides the appropriate level of protection.

Food spoilage – Chemical, physical or microbial changes in food that makes it unfit for human consumption.

Foodborne illness – Illness caused by pathogenic microorganisms or toxin-producing bacteria, typically ingested by humans through contaminated foods.

Foodborne infection – A foodborne illness that occurs when a living, disease-causing microorganism is eaten along with food.

Good Agricultural Practices (GAPs) and Good Production Practices (GPPs) – Recommended animal husbandry and best management practices.

Halal – An Arabic term, which translated means "permitted". For food to be permissible under Islamic law to be eaten by Muslims, it must come from animals which were slaughtered in a particular manner.

Hazard Analysis Critical Control Points (HACCP) – An internationally recognized and systemic approach to the identification, evaluation, and control of food safety hazards. It places emphasis on preventing food safety hazards from occurring during production, instead of detecting during end product inspection.

HACCP plan - The written document which is based on HACCP principles and which delineates the formal procedures to be followed by an individual plant or establishment.

HACCP records - Records that a food producer or food processor will keep proving that a HACCP program of safe food production is functioning as designed.

HACCP system– Used to refer to all prerequisite programs (premises, transportation and storage, equipment, personnel, sanitation and pest control, health and safety recall procedures and records) and HACCP plans.

Hazard - A biological, chemical or physical agent or factor that has the potential to cause a food to be unsafe for human consumption.

Hazard analysis - The process of collecting and evaluating information on hazards and conditions leading to their presence in the food under consideration, to decide which are significant for food safety and must be addressed in a HACCP plan.

Hormone – A chemical substance produced in the body that has a specific effect on the activity or function of a certain organ.

Inedible waste – Waste generated during food or meat processing considered unfit or not intended for human consumption.

Infectious –Used to describe various pathogenic microorganisms including viruses, bacteria, protozoa and fungi, which are capable of invading and growing in living tissues.

Irradiation – The process of exposing food or other items to radiation of various wavelengths in order to destroy contamination from undesirable organisms.

Livestock – Domestic animals, the meat of which is intended to be used for human consumption.

Lot/batch– A quantity of food produced under identical conditions.

Kosher– Fit to be eaten or used, according to Hebraic or Talmudic dietary or ceremonial law.

Meat and bone meal (MBM) – A product derived from the rendering of deadstock, abattoir waste and other food waste.

Microorganism– Small living organisms, such as bacteria, that are not visible to the naked eye.

Monitoring - Observing or taking measures at a Critical Control Point at prescribed frequencies for the purpose of verification.

Mould – Multi-cellular microorganisms that are often visible to the naked eye as fuzzy or powdery patches.

Nitrites/Nitrates - Nitrite and nitrate salts are food additives used in curing meats. They stabilize red meat colour, inhibit some spoilage and food-poisoning organisms, and contribute to flavour. Nitrates transform into nitrites in meat.

Offal – In red meat species, the edible organs or parts from the thoracic and abdominal cavities and the tongue. In poultry, the inedible waste materials left after the giblet organs are removed.

Organoleptic techniques – Examination by the five senses – sight, touch, smell, taste and hearing.

Parasite – An organism that is dependent on a living host for growth and reproduction.

Pathogen– A microorganism that can cause illness or disease in humans.

Pathogenic – Causing disease or sickness.

Perishable – Used to describe food that deteriorates rapidly.

Pesticide – A substance intended for killing or controlling insects, rodents, fungi or weeds.

Post mortem – After death (after slaughter).

Potable – Water which is fit or suitable for drinking.

Poultry – Chickens, ducks, geese, turkeys, and other birds.

Prerequisite programs - Steps or procedures, including Good Manufacturing Practices (BMPs, GPPs or GAPs) that control the operational conditions within a food establishment (or livestock production unit) allowing for environmental conditions that are favourable to the production of safe food. They provide the foundation for a HACCP system.

Prescription drugs – Drugs restricted to use by, or on the order of, a licensed veterinarian. These drugs require supervision because of toxicity, other potentially harmful effects or need of a more sophisticated method of administration.

Quality Management Program (QMP) – A phrase used to describe the federally legislated fish inspection and control system, that includes procedures, inspections and records, for the purpose of verifying and documenting the processing of fish and the safety and quality of fish processed in, exported from, or imported into Canada.

Recall – A system by which products that may be hazardous to consumers are removed from the marketplace.

Recognition – A term used to identify that an establishment's complete HACCP system has successfully passed a comprehensive CFIA review and recognition audit resulting in official written recognition of the HACCP system by CFIA. It also applies to commodity HACCP-based on-farm food safety programs.

Rendering – A process which is applied to animal raw materials, to cook and separate the materials into sterile fat and protein products such as tallow, meat and bone meal, blood meal, and feather meal.

Residue – When applied to livestock production, this refers to environmental pollutants, pesticides, veterinary drugs or hormones that are present in the tissues of animals at the consumption or pre-consumption stage.

Rework – The correction of a problem with meat or a carcass to salvage the meat or carcass.

Risk – The estimate of the likely occurrence of a hazard.

Ruminant – A mammal that chews its cud, has even toed hooves and a four-chambered stomach, such as a cow, buffalo, goat, deer or llama.

Sanitize – The process of reducing the number of microorganisms on a clean surface to safe levels.

Sector - A specific part of the food continuum such as production, slaughter (also called harvesting), processing, distribution, retail, food service or consumer.

Specified risk materials (SRM) – Parts of bovines which are considered to be capable or most likely to carry the infectious agent for TSEs: (a) skull, brain, tigeminal ganglia, eyes, tonsils, spinal cord and dorsal root ganglia of cattle aged 30 months or older; and (b) the distal ileum of cattle of all ages.

Standard Operating Procedures (SOPs) – Written procedures that are equivalent to prerequisite programs, which describe the various production processes. For livestock producers these often outline specific steps of 'BMP's' or 'GPPs" or "GAPs".

Sterilization – The destruction of all pathogenic and spoilage microorganisms.

Tallow – One of the products resulting from the rendering of animal carcasses and waste. Also referred to as animal fats and grease.

Third party accreditation - The official recognition of a food safety program across one or more sectors or commodities of the food continuum by a nationally accepted authority such as a standards organization, usually granted after an audit.

Third party audits - The periodic examination and verification of the food safety program following a system recognized by a nationally accepted authority and conducted by an agent approved by the government.

Toxin – Used to refer to a protein or conjugated protein substance produced by plants, certain animals and pathogenic bacteria that is highly poisonous for other living organisms.

Vaccine – A preparation containing live or killed microorganisms (bacteria or virus) administered to stimulate immunity to a specific disease.

Verification - The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine whether or not a HACCP system is functioning according to the HACCP plan.

Virus – Very small microorganisms that cannot survive on their own and must attach to and invade a living cell (plant, animal or bacterial) to survive and grow.

Wild ruminants - Bison, elk, caribou, deer, moose, musk ox, mountain goats and mountain sheep, which were not raised on a farm.

Withdrawal time or period – The recommended time between last drug treatment and the slaughter of an animal for food. This is the time necessary to ensure that residues are not present in meat obtained from the carcass.

Zoonoses/zoonotic – Diseases and infections which are transmitted naturally between vertebrate animals and humans.

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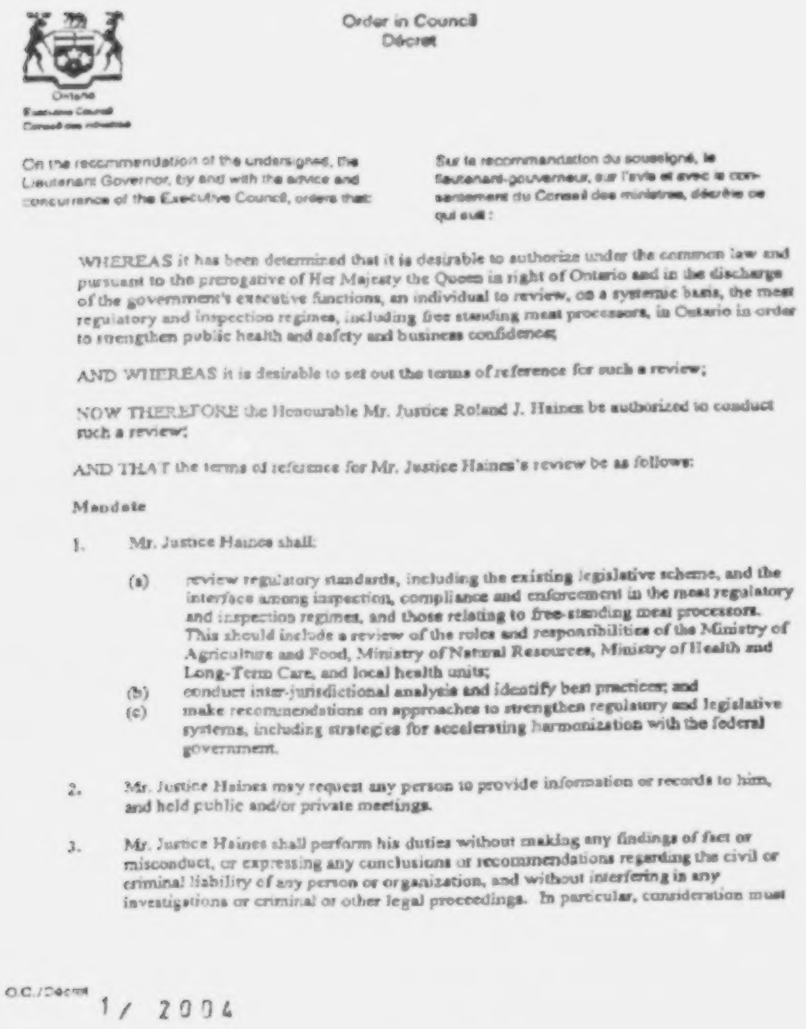
Appendix A - Order-In-Council



Ontario
Executive Council
Conseil des ministres

Order in Council
Décret

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and concurrence of the Executive Council, orders that:

Sur la recommandation du soussigné, le lieutenant-gouverneur, sur l'avis et avec le consentement du Conseil des ministres, décrète ce qui suit :

WHEREAS it has been determined that it is desirable to authorize under the common law and pursuant to the prerogative of Her Majesty the Queen in right of Ontario and in the discharge of the government's executive functions, an individual to review, on a systemic basis, the meat regulatory and inspection regimes, including free standing meat processors, in Ontario in order to strengthen public health and safety and business confidence;

AND WHEREAS it is desirable to set out the terms of reference for such a review;

NOW THEREFORE the Honourable Mr. Justice Roland J. Haines be authorized to conduct such a review;

AND THAT the terms of reference for Mr. Justice Haines's review be as follows:

Mandate

1. Mr. Justice Haines shall:

   (a) review regulatory standards, including the existing legislative scheme, and the interface among inspection, compliance and enforcement in the meat regulatory and inspection regimes, and those relating to free-standing meat processors. This should include a review of the roles and responsibilities of the Ministry of Agriculture and Food, Ministry of Natural Resources, Ministry of Health and Long-Term Care, and local health units;
   (b) conduct inter-jurisdictional analysis and identify best practices; and
   (c) make recommendations on approaches to strengthen regulatory and legislative systems, including strategies for accelerating harmonization with the federal government.

2. Mr. Justice Haines may request any person to provide information or records to him, and hold public and/or private meetings.

3. Mr. Justice Haines shall perform his duties without making any findings of fact or misconduct, or expressing any conclusions or recommendations regarding the civil or criminal liability of any person or organization, and without interfering in any investigations or criminal or other legal proceedings. In particular, consideration must

O.C./Décret 1 / 2004

be given to the deferral of interviews with potential witnesses in order to maintain the integrity of those processes.

4. Mr. Justice Haines shall deliver his final report containing his findings, conclusions and recommendations to the Attorney General on April 30, 2004 or, if requested by Mr. Justice Haines, at such later date approved by the Attorney General. In delivering his report to the Attorney General, Mr. Justice Haines shall be responsible for translation and printing and shall ensure that the report is available in both English and French, in electronic and printed versions, and in sufficient quantities for public release. The Attorney General shall make the report available to the public.

Resources

5. Within an approved budget, Mr. Justice Haines may retain such counsel, staff, investigators, and expert advisers, as he considers necessary in the performance of his duties at rates of remuneration approved by the Ministry of the Attorney General. Persons retained shall be reimbursed for reasonable expenses incurred in connection with their duties in accordance with Management Board of Cabinet Directives and Guidelines.

6. Mr. Justice Haines shall follow Management Board of Cabinet Directives and Guidelines and other applicable government policies in obtaining other services and goods he considers necessary in the performance of his duties unless, in Mr. Justice Haines's view, it is not possible to follow them.

7. All ministries, Cabinet Office, the Premier's Office, and all boards, agencies and commissions of the government of Ontario shall, subject to any privilege or other legal restrictions, assist Mr. Justice Haines to the fullest extent so that he may carry out his duties.

Recommended ______________________
Attorney General

Concurred Gerry Phillips
Chair of Cabinet

Approved and Ordered JAN 9 / 2004
Date

____
Lieutenant Governor

Appendix B - Aylmer Meat Packers Inc.– Its History with Ontario Ministry of Agriculture and Food

Introduction

Until the provisional suspension of its licence on August 21, 2003,[1] Aylmer Meat Packers Inc. (AMP) was a busy abattoir which slaughtered cattle and hogs and further processed and sold meat derived from them. It was known as a plant which specialized in non-ambulatory livestock described in the trade as "downers." The day before the provisional suspension and at the request of an investigator of the Ministry of Natural Resources (MNR), a justice of the peace issued six search warrants in respect of various locations linked to AMP amid allegations that AMP had caused meat from uninspected animals to enter the human food chain. The search warrants were executed on August 21 and 22, 2003.[2]

While little is yet known about the search and any resulting seizure, shortly after the execution of the search warrants, food products distributed by AMP became the subject of health hazard alerts and of a mandatory food recall order.[3]

Actions undertaken and the nature of the allegations in respect of AMP created a firestorm of publicity, concern and criticism of the provincial government's delivery of its oversight function. Undoubtedly, the fact that the events surrounding AMP unfolded during a provincial election campaign contributed to the strong political reaction. However, to suggest that AMP was a significant source of concern for that reason alone would be wide of the mark. The alerts and recall order had to be widely distributed to be effective. Their issuance created widespread fear that the health of an untold number was at risk and the fact that the allegations related to a long standing member of a regulated industry made criticism inevitable.

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[1] Ontario, *Meat Inspection Tracking Statistics*, (Ministry of Agriculture and Food, 2003).

[2] *R. v. Toronto Star Newspapers Limited et al.* (2003), 67 O.R. (3d) 577 at 579 (C.A.).

[3] The website of the Canadian Food Inspection Agency, www.inspection.gc.ca/english/corpaffr/recarapp/2003/20030824e.shtml contains the various health hazard alerts, updates and corrections is sued by that Agency. The first health hazard alert was issued August 24, 2003 and indicated that a mandatory recall order had been issued.

The handling of AMP specifically and meat regulation and inspection more generally were, almost immediately, the subject of detailed analysis, criticism and calls for a full public inquiry[4]. Many have alleged, both publicly[5] and privately, that AMP is the most telling example of a flawed system which, as presently constituted, provides little assurance that Ontario's meat supply will be safe or secure. While I believe those allegations to be overreaching, the experience provides additional support for the comments and recommendations contained in the chapter on Compliance and Enforcement and the chapter on Communications. Certainly, the events of August, 2003 and their aftermath demonstrate the vulnerability of the entire meat industry to even an isolated case of alleged wrongdoing. For that reason alone, AMP and its history require attention.

Pre-2003

Information provided by the Ministry of Agriculture and Food (OMAF) with respect to the status of the licences of and a summary of audit results for all provincially licensed abattoirs for the period from 2000 to 2003 confirmed the provisional suspension of AMP's licence on August 21, 2003.[6] Beyond recording that fact, and presumably because of the ongoing police investigation and the terms of the Order in Council authorizing the Review, the information provided by OMAF did not disclose that there had been any prior problems with respect to AMP's business activities.

Information obtained by the Review from other sources suggested that AMP had been the subject of Food Inspection Branch hearings during the period from 1991 until 2003.[7] The Review also learned from other sources that persons connected to AMP had been the subject of other enforcement proceedings as a result of actions taken during the course of AMP's business.

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[4] See for example, R. Cribb, *Penalties Rare for Bad Meat*, The Toronto Star (21 December 2003), and H. Daniszewski & R. Richmond, *Meat Check Disarray Denied*, The London Free Press (28 August 2003).

[5] *The Ontario Public Service Employees Union's Submissions and Recommendations to the Review into the Meat Regulatory and Inspection Regimes in Ontario*, dated March, 2004.

[6] While audit results for 2003 were provided to the Review for provincially licensed abattoirs, no results for AMP for that year were communicated. Presumably AMP's audit for that year had not occurred at the time of the provisional suspension of its licence.

[7] The Review received, from another source, a lengthy listing of regulatory and non-regulatory proceedings, and obtained a copy of a decision of the Director, Food Inspection Branch, dated May 13, 2002 relating to AMP which is referred to below.

A partial chronological listing of the regulatory and non-regulatory matters identified to the Review involving AMP or persons involved in AMP's business follows. For convenience, the listing includes items that occurred in 2003 although they are discussed in more detail in the next section.

Date	**Regulatory or Non-Regulatory Proceeding and Party**	**Substance of Allegation**	**Disposition**
August 28, 1991	Regulatory, AMP	Threat against meat inspector.	AMP's licence was provisionally suspended until September 17, 1991 at which time the licence was reinstated.
December, 1991 until late February, 1992	Regulatory, AMP	Failure to comply with a meat inspector's direction with respect to the disposal of a condemned animal.	Proceedings were protracted and on February 6, 1992 AMP's licence was provisionally suspended. On February 26, 1992, AMP's licence was reinstated subject to the preparation and execution of an inspection protocol.
September 21, 1994	Regulatory, AMP	Threats against meat inspection staff.	Licence was provisionally suspended and reinstated on October 3, 1994 on condition that an identified representative of AMP be absent while meat inspectors and veterinarians were on site.
Late March 1995	Non-Regulatory, Principal of AMP	Obstruction of inspector and removal of detained product without permission.	Two counts withdrawn; guilty plea entered by principal of AMP on a third count; fine of $2,000 imposed.
April 10, 1995	Non-Regulatory, Employee of AMP	Obstruction of inspector	Employee of AMP pled guilty and fined $1,500.

Date	Regulatory or Non-Regulatory Proceeding and Party	Substance of Allegation	Disposition
June 1995	Non-Regulatory, Principal of AMP	Incident arising from the circumstances resulting in the provisional suspension of AMP's licence on September 21, 1994.	Peace bond ordered and other terms and conditions imposed.
July 22, 1997	Regulatory, AMP	Bacteriological contamination.	Licence provisionally suspended. Operating agreement prepared and signed in late July, 1997 resulting in the reinstatement of AMP's licence.
August 1998	Regulatory, AMP	Illegal slaughter	Warning given.
September 6 to October 30, 1998	Regulatory, AMP	Obstruction of meat inspector and disposition of carcass of animal illegally slaughtered	Carcass condemned; finding of obstruction made; warning given.
February 1999	Regulatory, AMP	Obstruction and breaking detention	Hearing adjourned without a definite return date on the basis of the preparation and execution of a memorandum of understanding in March, 1999.
July 1997 to November 1999	Non-Regulatory, Principal of AMP	Assault of an OMAF veterinarian and a Ministry of Labour representative.	In November, 1999, a principal of AMP found guilty of assault and obstruction and fined. Conviction related to July, 1997 incident.

Date	**Regulatory or Non-Regulatory Proceeding and Party**	**Substance of Allegation**	**Disposition**
April 2002 to May 2002	Regulatory, AMP	Multiple animal welfare violations including improper stunning, inhumane handling and transportation of livestock.	Licence retained on conditions relating to the provision of further training, improved equipment maintenance, provision of adequate animal shelter, execution of a written protocol with AMP's suppliers and truckers transporting compromised livestock and an OMAF animal welfare re-audit.
January 2003	Non-regulatory, AMP	Charged with collecting a dead animal without a licence under the *Dead Animal Disposal Act*.	Acquitted.
January to August 2003	Regulatory, AMP	Over 40 occasions, received non-ambulatory animals without required veterinary certificates.	No sanction beyond holding and testing of animals. On some occasions, animals condemned.
August 21, 2003	Regulatory, AMP	Breach of s. 2(4) of the *Meat Inspection Act* (which states that no person shall engage in the production, processing, handling or storage of a meat product at a plant except in accordance with the regulations)	The licence of AMP was provisionally suspended.

As evidenced by the chronology, AMP's business practices were the subject of ongoing concern on the part of OMAF and others. In addition to the formal regulatory and non-regulatory proceedings, OMAF also started to investigate other allegations against AMP involving the alleged processing of deadstock, the alleged alteration of samples and illegal slaughter arising from complaints made in 1999. While OMAF's then existing Investigative Unit undertook some investigation of these allegations, its precise scope and its outcome are unknown.[8]

For many years, OMAF has, either through its own personnel or more recently through contracted veterinarians, audited provincial licensees in relation to food safety, animal welfare and occupational health and safety. While limited audit results have been provided to the Review, long continuing deficiencies with respect to AMP were identified. In 2000 and 2001, AMP received, according to OMAF, a respectable audit rating.[9] The Corrective Action Plans for 1999 and 2001 obtained by the Review evidenced, however, long and concerning lists of corrective actions in each of the food safety, animal welfare and occupational health and safety areas.

In December, 2001, the Ontario Society for the Prevention of Cruelty to Animals (OSPCA) commenced an investigation of an animal welfare complaint. While no charges were ever laid, the OSPCA obtained a search warrant which was executed on February 1, 2002. Extensive concerns with respect to AMP's animal handling practices were featured in the decision of the Director of the Food Inspection Branch released May 13, 2002. The Director heard evidence from the veterinarian who conducted AMP's 2001 annual audit, and two meat inspectors, an area manager, a regional veterinarian and a program manager all employed by OMAF. They provided graphic and troubling evidence concerning improper stunning techniques, malfunctioning stunning equipment, overcrowding, exposure to the elements and inhumane handling. The evidence established that between March 4, 2002 and April 22, 2002:

(a) a number of hogs had regained consciousness before death;

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[8] On April 26, 2004, OMAF advised the Review that annual reports of its chief investigator for the period from 1992 to 1999 were not prepared and that any log books maintained thereby had not been located.

[9] The Review was advised by OMAF that in 2000, AMP received an audit rating of 82% whereas the Toronto Star reported, on November 28, 2003 in an article entitled "Meat Packer had Prior Violations" that AMP had received an audit rating of 59% in 2000-2001. Thereafter, the audit grade changed from a numerical number to a letter-based system. OMAF advised the Review that AMP received a "B" audit rating in 2001 and 2002. Copies of the actual audits were not provided.

(b) segregated pens for injured livestock did not exist;

(c) a maintenance program for stunning equipment had not been established;

(d) sheep destined for *halal* slaughter had been dragged across the floor while alive;

(e) cattle had been subjected to multiple unsuccessful stunning attempts;

(f) truckers walked on top of hogs in a trailer;

(g) hogs were prodded excessively while unloaded;

(h) non-ambulatory livestock was dragged off trucks;

(i) cattle and market hogs were allowed to walk on non-ambulatory cows;

(j) multiple dead hogs were found in a group of downer hogs with no indication that access to water has been provided.

Despite those observations, AMP's licence had not been provisionally suspended. AMP's sole witness blamed many of the obvious problems on malfunctioning new equipment, an inability to observe the activities of independent truckers during unloading and expressed an intention to take remedial action.

In his decision, the Director observed that:

> *An operator of a plant that is engaged in the slaughter of debilitated and infirm livestock, must take extraordinary measures to ensure that all animals are handled in the most humane manner possible . . . In addition, the operator must ensure that all staff are properly trained in livestock handling and operation of stunning equipment. Any other individuals such as truck drivers who are unloading livestock must adhere to the same principles of animal welfare . . .*

The Director found that:

> *. . . the overall facilities and operational practices of Aylmer Meat Packers Inc. are not in compliance with the*

> *regulations nor are they in conformance with good livestock handling practices . . . There can be no tolerance for practices that cause unnecessary pain or distress to livestock in Ontario licensed abattoirs.*

Notwithstanding a lengthy history of obstruction and verbal and physical confrontation, the Director suggested "[w]hen non-compliance is observed, inspectors should communicate with the plant operator or someone designated by him." The Director was critical of inspectors who "often tried to deal directly with truckers or employees and noted "[t]he plant operator was not informed in a timely manner in all cases." Despite obvious reservations, the Director was encouraged that "the operator had made 'some adjustments' in practices . . . to ensure animal welfare," had "responded to inspector orders for corrective action," "by the investments that Aylmer Meat Packers Inc." had made in equipment, its promise to continue upgrading facilities and in the stated willingness of plant management to work with the Ministry to make ongoing improvements that protect animal welfare.

AMP was ordered to provide documented training, establish a documented maintenance program, enter into a written protocol with suppliers and truckers of compromised livestock, provide adequate shelter and submit to an animal welfare audit within 30 days. AMP's licence was not suspended, or otherwise affected, and no penalty of any kind was imposed. I am unable to say whether AMP complied or not.

AMP's 2002 audit resulted in another long and detailed Corrective Action Report. It identified 41 items categorized as "major," 42 as "serious," 9 as "moderate," and one as "minor." The Corrective Action Report evidenced a wide range of concerns, including but not limited to, those which could compromise food safety.[10] It did not, however, refer to those issues addressed in the May 13, 2002 decision.

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[10] The 2002 Corrective Action Report included, in the "major" category, these comments: "Not all meat processing and handling equipment is made of approved material," "The operator does not ensure that employees use hygienic food handling practices," "Condensation is not adequately controlled in operational areas;" "Not all dressed carcasses are adequately trimmed to remove contamination before chilling;" "Beef by-products harvesting is not hygienic and/or

Concerns with respect to AMP's activities existed elsewhere in Ontario's regulatory system as well. Less than two months later, a provincial officer acting under the *Ontario Water Resources Act*[11] required that AMP and its officers and directors take action to prevent the discharge of liquid waste from a beef feed lot and transfer facility in the County of Brant. It was subsequently alleged that the terms of the order had not been fulfilled and AMP and its officers and directors were charged under s. 107(2) of the *Ontario Water Resources Act*. I understand those charges remain outstanding.[12]

The Events Leading up to the Provisional Suspension of AMP's Licence

In January, 2003, a charge laid against AMP by the MNR[13] pursuant to the provisions of the *Dead Animal Disposal Act* (DADA)[14] was tried by a justice of the peace in Owen Sound. The charge was laid as a result of an allegation that AMP had collected and transported a dead animal despite the fact that AMP did not, and as a licensed abattoir could not, hold a licence to collect or to transport animals which had already died on-farm. The charge was dismissed as the evidence led at trial suggested that the animal in question may have been alive at the time of collection.[15]

Given the nature of AMP's business, the transportation of non-ambulatory animals was common and permitted so long as the legislative conditions were fulfilled.[16]

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not all parts are approved and/or properly prepared;" "During storage and handling, potential contamination of ready-to-eat meat products is not controlled;" "There is contact between cooked and raw meat products during processing and/or packaging and/or storage."

[11] *Ontario Water Resources Act*, R.S.O. 1990, c. O.40.

[12] Ministry of Environment, News Release, *Aylmer Meat Packers Inc. and Owners Charged With Failing to Comply with Environmental Order* (21 January 2004). R. Cribb, *'Deadstock' Focus of Meat Plant Probe*, The Toronto Star (27 August 2003), reported that while under appeal, AMP had been convicted in December, 2002 of improperly discharging abattoir waste and fined $30,000.

[13] The MNR obtains its authority from a Cooperative Agreement and Service Level Agreement entered into with OMAF.

[14] Under the *Dead Animal Disposal Act*, R.S.O. 1990, c. D.3, no person shall collect or transport dead animals without a licence (s. 5). Abattoirs are prohibited from holding a licence under the DADA, s. 13(b).

[15] The Legal Services Branch of the MNR provided information to the Review with respect to the trial. Apparently reasons were delivered orally and were not transcribed.

[16] O. Reg. 732/94 and R.R.O. 1990, Reg. 729, s. 17.1.

A review of OMAF's 2003 incident reports for non-ambulatory livestock revealed that there were sixty-nine incidents in which non-ambulatory cattle arrived at a provincially licensed abattoir without the required veterinarian certificates or with improper veterinarian certificates. Forty-nine of those incidents involved cattle arriving at AMP.[17] Beyond holding and conducting tests on the arriving animals and, on occasion, condemning the animals, no sanction appears to have been imposed.

The informations utilized to obtain the AMP search warrants issued on August 20, 2003[18] and executed shortly thereafter make a number of allegations although no charges have been laid against AMP to date. The informations allege that:

- AMP was the subject of surveillance on fourteen occasions between May 11 and August 20, 2003;
- on eight occasions, no suspicious activities took place;
- on five occasions between June 6 and July 17, 2003, dead cattle were unloaded and taken into the AMP killing room after meat inspection staff had left. A similar activity was alleged to have occurred on August 20, 2003;[19]
- meat from the dead animals was "quickly processed" and then "mixed together with legitimate meat products" despite the fact that meat from dead animals "may be diseased, laden with antibiotics or contain high levels of faecal (sic) contamination (E. coli 0157:H7) that can produce serious health concerns, including death."[20]

Based on this information, the search warrants were issued and AMP's premises were searched on August 21 and 22, 2003. On the basis that it was necessary for the "immediate protection of the safety or health of any person or animal or the public," AMP's licence was provisionally suspended on August 21, 2003.[21]

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[17] Those were the reported incidents up to August 21, 2003 when AMP's licence was provisionally suspended.

[18] A copy was obtained by the Review subject to the editing ordered in *R. v. Toronto Star Newspapers Limited et al., supra* note 2. All of the informations are reported to be virtually identical.

[19] O. Reg. 632/92, s. 55(2) prohibits the taking of an animal into the killing room unless the animal received an *ante mortem* inspection and was approved for slaughter by an inspector.

[20] Informations to obtain search warrant, pp. 14-15, para. 38.

The Aftermath of the Provisional Suspension of AMP's Licence

Due to the ongoing investigation, no other information was sought or obtained by the Review with respect to AMP's provisional licence suspension or any possible enforcement action. Given the fact that there were food safety concerns, however, it is important to summarize the effect of the allegations and the response to them.

While the circumstances are unknown, the MNR investigation would have been initiated at OMAF's request.[22] Undoubtedly, therefore, OMAF was aware of the concerns of the MNR investigators but to what extent OMAF was aware of the progress of the investigation or of the health concerns before August 21, 2003 is unknown.[23]

Neither MNR nor OMAF have any food recall power and no jurisdiction in respect of free standing meat processors or retail locations. In order to effect a food recall or to attempt to identify, locate and detain product that may have left the AMP plant, the assistance of the Ministry of Health and Long-Term Care (MOHLTC) and the local health units provincially and, federally, the Ministry of Agriculture and Agri-Food and the Canadian Food Inspection Agency (CFIA) is required.

On August 24, 2003, the CFIA with the stated approval of the acting Chief Medical Officer of Health for Ontario, warned consumers not to consume beef or beef products which originated from AMP because they were believed to pose a public health risk. The CFIA indicated that the Minister of Agriculture and Agri-Food had issued a mandatory recall order requiring all persons selling, marketing or distributing AMP beef or beef products to recall them.[24] The CFIA attached lists of stores, which it later updated and corrected, that were affected by the recall. News reports suggested that CFIA officials indicated that they had first heard of the concerns which resulted in the health hazard alert and mandatory food recall order on August 22, 2003.[25] That report is consistent with the timing of the mandatory food recall. It is also consistent with the provincial experience.

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[21] The wording is drawn from *Meat Inspection Act (Ontario)*, R.S.O. 1990, c. M.5, s. 5(2).

[22] As required by the provisions of the Cooperative Agreement and Service Level Agreement entered into between OMAF and MNR.

[23] Although pursuant to the Cooperative Agreement and the Service Level Agreement, MNR has a contractual obligation to advise OMAF of the status of investigations from time to time.

[24] Posted on the CFIA website www.inspection.gc.ca on August 24, 2003.

The Elgin-St. Thomas Health Unit in which AMP was physically located, was contacted by OMAF by telephone approximately mid-afternoon on August 21, 2003. That initial notification provided the local health unit with basic information and communicated OMAF's concern that a food safety issue existed in relation to beef products.

The MOHLTC first learned of OMAF's concerns the following day and immediately advised all local health units of the unfolding situation and asked that health units review any unusual enteric diseases.

On August 24, 2003, the MOHLTC issued its own public health advisory recommending that consumers not eat any meat products which originated from AMP or that may have used AMP beef in their production. The MOHLTC suggested that the public health risk was low even if such products had been consumed, so long as they were properly cooked. The MOHLTC also provided educational information designed to inform readers of the basic symptoms of food-poisoning and food-borne illnesses. Its notice was updated the next day.

The update repeated the cautionary message expressed before, advised the public of the provisional suspension of AMP's licence, indicated that a criminal investigation was underway at the instance of the Ontario Provincial Police (OPP) and advised readers that there had been no reports of illness associated with the consumption of products from AMP.

On August 27, 2003, OMAF, without reference to AMP, issued a news release outlining the nature and purpose of OMAF's meat inspection system.

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[25] R. Cribb, *10 Dead Stock Cases: Source*, The Toronto Star (29 August 2003).

On that same day, the Ministry of Community Safety and Correctional Services released a statement of Dr. James Young, the Commissioner of Public Safety and Security, with respect to the AMP situation. Dr. Young indicated that he had been appointed by the Premier that day to coordinate, on behalf of the Government of Ontario, an investigation into issues arising from the AMP situation. The statement was clearly designed to allay public concern by stressing that the difficulties with respect to AMP appeared to be limited to beef and beef products and by indicating that less than one percent of Ontario's meat supply was processed there.[26]

On August 28, 2003, the office of the Premier of Ontario issued a press release announcing that a former Deputy Solicitor General and Deputy Minister of the Environment had been asked to recommend improvements to processes and tools used to investigate safety in the food industry. The press release confirmed that Dr. Young had been requested to report on the day-to-day issues regarding the AMP situation. The Premier said, "We cannot let one situation under investigation diminish the confidence we have in so many dedicated and professional members of the food industry."

A further press release was issued by the Ministry of Community Safety and Correctional Services on September 8, 2003. It reported that extensive testing of products from AMP had been completed by the University of Guelph's laboratory services division and quoted Dr. Young as reporting that preliminary results suggested recalled meat products from AMP posed "minimal risk to the public." While the press release indicated that samples had been randomly collected and tested in accordance with protocols established by the CFIA, the press release did not indicate whether or to what extent samples had been obtained and tested by others.

On September 15, 2003, the OPP issued a news release advising the public of a hot line number that had been established for those wishing to provide information concerning AMP's operations. The OPP indicated that it had commenced its investigation into possible criminal wrongdoing after receiving a request from Dr. Young on August 27, 2003.

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[26] I suspect this refers to 1% of meat processed at provincially licensed abattoirs. The actual percentage is unknown. AMP was then one of over 200 provincially licensed abattoirs.

The CFIA, which was charged with the task of monitoring the effectiveness of the mandatory recall order in conjunction with the MOHLTC and local public health units, continuously updated, corrected and consolidated health hazard alerts until September 16, 2003.[27]

Press coverage of the unfolding events was substantial.[28] Writers suggested that:

- provincial standards were different from and deficient in comparison to those in federal facilities;[29]
- provincial oversight was lacking given AMP's history of complaints;[30]
- interaction between OMAF and the MNR was lacking;[31]
- the AMP situation was a product of budget cuts, lack of regulatory oversight and a history of ignoring concerns expressed by inspectors and auditors;[32]
- concerns with AMP were not limited to meat production given the commencement of an investigation by the OSPCA concerning animal welfare issues and the fact that AMP and its principals were the subject of a number of charges under environmental legislation;[33]

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[27] Two updates were released – August 25 and a correction was issued August 27, followed by a consolidated update on that same day, an educational piece in the form of questions and answers was released August 29, after a further correction and update were issued August 28, further updates were released August 29 and 30, 2003, a further correction on September 2 with final updates released September 5 and 16, 2003.

[28] Articles appeared in newspapers throughout the province.

[29] See for example, R. Cribb, *Testing Standards Vary for Plants*, The Toronto Star (27 August 2003).

[30] R. Cribb, *Deadstock' Focus of Meat Plant Probe*, The Toronto Star (27 August 2003); H. Daniszewski, *Packer Faces Stiff Penalties*, The London Free Press (29 August 2003); and P. Waldie, *Aylmer Warnings Ignored, Inspectors Say*, The Globe and Mail (5 September 2003).

[31] Attributed to Premier Eves in R. Cribb, *10 Dead Stock Cases: Source*, The Toronto Star (29 August 2003).

[32] R. Cribb & R. Brennan, *Processing Plants Pose Health Risk: Document*, The Toronto Star (11 September 2003); P. Waldie, *Aylmer Owner has Troubled History*, The Globe and Mail (6 September 2003); and H. Daniszewski, *Packer Faces Stiff Penalties*, The London Free Press (29 August 2003).

[33] R. Cribb, *Call for Ministers to Resign*, The Toronto Star (30 August 2003); P. Waldie, *Aylmer Owner has Troubled History*, The Globe and Mail (6 September 2003).

- systemic failures existed including a lack of regulatory supervision of free standing meat processors, inconsistencies in food handler training requirements with no provincial standard existing and municipal requirements varying across the province;[34]
- systemic failures were acknowledged by the regulator itself as evidenced by OMAF's April 2002 cabinet submission. It was said to outline deficiencies in the meat inspection system which followed "the Walkerton pattern." Existing legislation was criticized as being unresponsive to technological advances, industry initiatives and market demands and the failure to develop regulations to bring life to the *Food Safety and Quality Act, 2001* despite its proclamation in December 2001 was assailed.[35]

The intense media coverage continued for weeks.[36] On September 2, 2003, the Crown sought, on a without notice basis, an order sealing all information in or relating to the AMP search warrants on the basis that disclosure could identify a confidential informant and jeopardize the ongoing criminal investigation.

A member of the media was present on the return of the Crown's application and requested an adjournment so that counsel for the media could attend and offer opposition. The request was denied and a sealing order was granted.[37]

Various media outlets combined to successfully overturn the sealing order. On September 24, 2003, the Superior Court of Justice directed that the informations used to obtain the search warrants be made public subject to editing designed to protect the informant's identity. The Crown's appeal was heard by the Court of Appeal on an expedited basis. Two additional paragraphs were ordered to be excluded.[38]

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[34] R. Cribb, *Food Handler Training 'is essential,' Tories told*, The Toronto Star (12 September 2003).

[35] R. Cribb, *Tories Fail to Act on Meat Warning*, The Toronto Star (11 September 2003); and J. Sher, *Ministry Accused of Inaction*, The London Free Press (12 September 2003).

[36] See for example, M. Jimenez, *Officials probing meat-related illnesses*, The Globe and Mail (1 September 2003); C. Sorenson, *What the Butcher Doesn't Know Can Hurt You*, The Toronto Star (28 September 2003); J. Sher, *Aylmer Processed Dead Stock, Warrant Says*, The London Free Press (24 October 2003); and R. Cribb, *Penalties Rare for Bad Meat*, The Toronto Star (21 December 2003). AMP was also raised whenever other meat related issues were discussed. See for example, K. Harries & Luke Hendry, *Questionable Meat Sold in Eastern Ontario Cities*, The Toronto Star (9 October 2003) and *Meat Safety: Is it Safe to Eat Canadian Beef?*, CBC News Online (29 December 2003), available from http://www.cbc.ca/news/background/madcow/meatsafety.html [accessed 19 May 2004].

[37] Described in *R.* v. *Toronto Star Newspapers Limited et al., supra* note 2.

As outlined, while a great deal of media attention focussed on the AMP operation and the provincial government's oversight of that operator, a much wider range of issues was raised and examined. The adequacy and effectiveness of the regulatory scheme as a whole was put into question, perceived failures were exposed and targets for the placement of blame sought. It was only later that there was any questioning of whether the health hazard alert and mandatory food recall order should have been issued at all. In the relative calm of the ensuing months, there was limited recognition of the possibility that AMP's customers may have suffered damage to their reputation and business in circumstances where proof may have been lacking that any portion of the recalled product in fact constituted a health hazard.[39]

AMP is a dramatic illustration of conflicting tensions and interests.

From the side of those investigating alleged wrongdoing, there is a fear that communication can occur too early when suspicion borders on speculation or beyond that but before needed evidence is in hand. If communication occurs too early, investigators fear that their investigation may do no more than stop illegal activity temporarily and drive it further underground. At worst, investigators fear confidential information may fall into the wrong hands and jeopardize the safety of the investigators themselves. Further, there is an obvious risk that premature communication of suspicion may precipitate erroneous allegations of wrongdoing and unfairly jeopardize the businesses of those being investigated and those with whom they deal.

Those concerned solely with food safety believe that communication should occur at the first instant there is a suggestion that harm may be occasioned to a consumer. They believe that steps must be taken to ensure the removal of food that is or which may be unwholesome until concerns of contamination are eliminated. Allowing product that is suspected to be unfit for human consumption to be distributed or consumed in order to obtain better evidence and a greater chance of conviction exposes the public to sickness or even, in extreme cases, to death and taking that risk, no matter how small, is viewed by many as simply unacceptable.

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[38] *Ibid.*

[39] One such article is R. Cribb, *Meat Recall Left Bad Taste for Business in Middle*, The Toronto Star (22 December 2003). Earlier the meat sample results had been reported in a Canadian Press release, *Aylmer says it's gratified test shows meat products likely safe for humans*, (9 September 2003), available from http://www.canoe.ca/CNEWS/Canada/2003/08/25/pf-168700.html [accessed 19 May 2004].

Those tensions yield no easy answer but must be addressed. Those responsible for enforcement and those responsible for the protection of public health must have in place a current, coherent and comprehensive protocol which represents a fair balance of enforcement and safety concerns. The issues exposed by AMP are discussed throughout this Report.

Present Status of AMP

The provisional suspension of AMP's licence appears to continue.[40] On the non-regulatory side, the Review understands that the OPP investigation continues. The MNR is no longer acting in respect of AMP and indeed the statutory time limit for the laying of charges by that Ministry has passed.[41] From published reports, the Review understands that legal proceedings have been commenced by AMP against the federal and provincial governments.[42]

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[40] Although, technically, AMP licence expired March 31, 2004. In the usual case, OMAF will "deem" the licence to continue until a hearing is held.

[41] See the *Provincial Offences Act*, R.S.O. 1990, c. P.33 as amended, s. 76(1) which provides (insofar as the MIA and DADA are concerned) that a proceeding shall not be commenced, absent the consent of the defendant, after six months after the date on which the offence was, or is alleged to have been, committed.

[42] As reported by the media. See J. Sher, Aylmer Staff Sue OPP, Province, The London free Press (24 June 2004) which suggests certain employees of AMP have recently initiated proceedings.

Appendix C - Wallace Beef Inc.

Background

Wallace Beef Inc. (Wallace Beef) started operations as a provincially licensed slaughter plant on premises at the Pittsburgh Institution leased from the business arm of the Correctional Service of Canada (Correctional Services) in or about 1995.

Joyceville Institution is a medium security correctional institution on 640 acres between Highway 15 and the Rideau Canal, approximately 20 kilometres northeast of Kingston which officially opened in 1959. Pittsburgh Institution is adjacent to Joyceville Institution which opened in 1963 as the "Joyceville Farm Annex." The facility is minimum security with slightly over 190 inmates and was designed to manage a herd of thirty beef cattle and an abattoir which produces meat for Joyceville Institution and other area prisons. Today, Pittsburgh Institution has an agri-business which includes cattle, vegetable gardens and a greenhouse.[1]

Joyceville Institution and Pittsburgh Institution are operated by Correctional Services. The head of Correctional Services, the Commissioner of Corrections, reports to the Minister of Public Safety and Emergency Preparedness of the federal government.

Wallace Beef was issued a licence under the *Meat Inspection Act* (Ontario) by the Director of the Food Inspection Branch of the Ontario Ministry of Agriculture and Food (OMAF). The operations of Wallace Beef were regulated under the *Meat Inspection Act* (Ontario) as administered by OMAF and, although a commercial operation operated by a private businessperson, provided training to inmates of the institution.

Wallace Beef is reported to have utilized between twelve to fifteen inmates to staff the plant who worked in the plant as part of an apprenticeship/rehabilitation program designed to train inmates for employment in a variety of work sectors.[2] Wallace Beef paid approximately $1.50 per hour toward the wages of the inmates and had four staff other than the prison inmates.[3]

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[1] Correctional Service of Canada, *Institutional Profiles: Pittsburgh Institution*, available from http://www.csc-scc.gc.ca/text/facilit/institutprofiles/pittsburgh_e.shtml [accessed 28 April 2004].

The abattoir conducted custom slaughter for local farmers and sold meat to local butchers, institutions and restaurants. It also sold meat to the public at a retail counter on the premises in addition to supplying meat to federal correctional facilities.[4] The plant operated around three to four days per week slaughtering less than fifty cattle, sheep and pigs each week.[5]

OMAF gave Wallace Beef a grade of 82% on its compliance rating for the year ending March 31, 2001 and "A" audit ratings for the years ending March 31, 2002 and March 31, 2003. The last annual audit was completed within three weeks of the closure of the plant. An "A" rating is given to plants which are "meeting regulatory requirements"[6].

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[2] *Owners of prison-run plant say meat is safe*, CTV.ca News Staff (9 October 2003), available from http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1065703668405_13 [accessed 1 April 2004]; *Meat from prison-run plant sold to public*, Canadian Press (8 October 2003), available from http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1065628673366_61037873 [accessed 1 April 2004]; *Meat from prison-run Joyceville plant sold to public in Ontario, maybe Quebec*, Canadian Press, M. Habib (8 October 2003), available from http://medbroadcast.com/health_news_details.asp?news_channel_id=1000&news_id=2438 [accessed 28 April 2004]; *Ontario police probing jailhouse abattoir again*, Canadian Press (21 October 2003), available from http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/1066751843367_62161043/?hub=Canada [accessed 1 April 2004].

[3] *Meat plant owner regrets working with inmates*, Canadian Press (9 October 2003), available from http://www.ctv.ca/servlet/ArticleNews/story/CTVNews/20031009/meat_plant_jail_031009/Canada?s_name=&no_ads [accessed 1 April 2004]; L. Lambert, *Farmers rally behind Wallace Beef*, Kingston This Week (2 December 2003).

[4] *Police investigate prison meat plant*, CBC News (8 October 2003), available from http://www.cbc.ca/stories/2003/10/08/consumers/prison_meat031008 [accessed 1 April 2004]; *Meat from prison-run Joyceville plant sold to public in Ontario, maybe Quebec*, Canadian Press, *supra* note 2.

[5] *Meat from prison-run Joyceville plant sold to public in Ontario, maybe Quebec*, Canadian Press, *supra* note 2.

[6] OMAF, *How Does Your Plant Rate*, (Queen's Printer for Ontario, 2003, 09-03-5M).

Events of October & November 2003

In October 2003, the media reported Wallace Beef had been shut down by Correctional Services[7] and on October 7, 2003, the Director of the Food Inspection Branch of OMAF provisionally suspended its licence. This suspension came soon after the warden of Pittsburgh Institution contacted the Director of the Food Inspection Branch to report that the abattoir had been temporarily closed because of alleged questionable practices. OMAF advised the public that there was no known threat to public health, but all meat products were being detained in the plant as a precautionary measure.[8]

OMAF directed the Ministry of Natural Resources (MNR) to investigate pursuant to the Cooperative Agreement between the two ministries. Information was also provided to the Canadian Food Inspection Agency (CFIA) and the office of the Chief Medical Officer of Health of Ontario. The Public Health Branch of the Ministry of Health and Long-Term Care (MOHLTC) notified staff at the Kingston, Frontenac and Lennox and Addington Health Unit.

On or about October 7, 2003, Correctional Services reportedly ordered a police investigation. Within twenty-four hours, the Ontario Provincial Police (OPP) concluded that there was no criminal wrongdoing, but advised the media it would re-institute its investigation if further information surfaced in the MNR investigation.[9]

There was little heard about the plant or any investigation over the next two weeks until the media reported that the OPP had entered the plant again on October 20, 2003 and Correctional Services advised that a criminal investigation was underway.[10] It was reported that an unidentified inmate who worked at the plant[11] had made certain allegations that had led to the investigation.[12]

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[7] Correctional Service of Canada, News Release, *Correctional Service of Canada Suspends Operations of Private Firm's Meat Processing Plant at Pittsburgh Institution* (8 October 2004); L. Lambert, *Farmers rally behind Wallace Beef, supra* note 3.

[8] *Meat from prison-run Joyceville plant sold to public in Ontario, maybe Quebec*, Canadian Press, *supra* note 2.

[9] *Police investigate prison meat plant*, CBC News, *supra* note 4; *Meat from prison-run plant sold to public*, Canadian Press, *supra* note 2; *Meat from prison-run Joyceville plant sold to public in Ontario, maybe Quebec*, Canadian Press, *supra* note 2; *Ontario police probing jailhouse abattoir again*, Canadian Press, *supra* note 2; *Criminal probe resumes at jailhouse abattoir*, Canadian Press (21 October 2003), available from http://www.globeandmail.com/servlet/story/RTGAM.20031021.wmeat1021/BNStory/National [accessed 28 April 2004].

On November 3, 2003, the plant operator advised the media that he had been told that the problem was with respect to *halal* meat. He also advised that he had not been permitted back into the plant for several weeks when he was allowed to return to remove approximately 67,000 pounds of spoiled meat that he valued at $200,000.[13] The OPP confirmed that the investigation related to the preparation and packaging of meat. On November 4, 2003, Correctional Services announced that although their investigation was ongoing,[14] frozen meat from the plant had been deemed safe to eat.

The provisional suspension of the licence by OMAF was lifted on Sunday, November 9, 2003.[15] The plant reportedly re-opened on November 12, 2003 and slaughter resumed within a few days. The plant was permitted to supply correctional institutions and its wholesale customers, but was not allowed to open its retail operation.

On November 25, 2003, the media reported that the material filed in support of the OPP search warrant indicated the police were investigating allegations that the plant had:

- sold product containing meat from dead animals;
- sold uninspected meat; and

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[10] *Criminal probe resumes at jailhouse abattoir*, Canadian Press, *supra* note 9.

[11] J. Pringle, *Kingston Meat Plant Seized by OPP*, available from http://www.cfra.com/headlines/index.asp?cat=1&nid=7166 [accessed 25 May 2004].

[12] C. Szalarski, *Owner rues jail meat plant*, Canadian Press, (10 October 2003), available from http://www.canoe.ca/NewsStand/LondonFreePress/News/2003/10/10/221872.html [accessed 28 April 2004].

[13] L. Lambert, *Unblessed halal meat results in plant shutdown*, Kingston This Week (3 November 2003).

[14] OMAF, News Release, *Abattoir's Licence Suspension Lifted* (10 November 2003).

[15] *Ibid.*, The *Meat Inspection Act* (Ontario) permits the Director of the Food Inspection Branch of OMAF to provisionally suspend a licensee's licence where, in the Director's opinion, it is necessary to do so for the immediate protection of the safety or health of any person or animal. The Director gives reasons for the suspension in the suspension notice and thereafter holds a hearing to determine whether the licence should be further suspended or revoked. The Review did not receive a copy of the provisional suspension notice nor a copy of any hearing records.

- sold meat as *halal* which had not been slaughtered according to Islamic religious practice.[16]

The Review is not aware of any charges being laid to date and has no information that Wallace Beef has any history of regulatory breaches.

The events relating to Wallace Beef are significant to the extent they illuminate concerns that were expressed to the Review with respect to the apparent lack of co-ordination among the multiple agencies involved in the investigation process since no one agency appears to have taken the lead in collecting, distilling and disseminating available information in order to fairly inform and reassure each other and the public.

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[16] F. Armstrong, *Warrants reveal scope of abattoir probe: Criminal allegations include butchering of dead animals, selling unfit meat*, The Kingston Whig-Standard (25 November 2003).

Appendix D - Farmed Animal Statistics

	Cattle		Calves (Beef & Veal)	Dairy Cows	Swine	Poultry	Sheep & Lambs	Goat	Deer	Elk	Wild Boar	Llama	Bison	Ratites
Number of Farms in Ontario	16,179 (beef cows)		23,906	7,557	4,972	8,306 (1,200 commercial poultry)	3,978	2,342	234	100	58	437	58	241
Average Size of Farms in Ontario	53 head (average beef cow herd size in Canada)		175 grain fed veal / 400 milk fed veal	50				26.6	61.8	59	25.8	5.8	64.7	15 ostrich 29 emu & rhea
Location of Production	beef cow	fed cattle	Veal											
Ontario	8.3%	21.2%	40%		24.7	32-39	28.3							
Alberta	39.0%	67.7%												
Quebec/Atlantic	5.8%	1.9%	55%											
Saskatchewan, Manitoba, B.C.	46.9%	9.2%	5%											
Estimated Animal Populations in Ontario	1,036,000 (376,020 beef)		528,000 (beef) 100,000 (veal)	566,000	3,460,000	43,624,696	337,625	62,310	14,464	5,902	1,499	2,554	3,755	8,121
Estimated Animal Populations in Canada	9,286,714		5,203,770	1,060,965	14,666,900	126,159,529	1,262,448	182,851	53,258	74,478	33,131	25,782	145,094	21,027
Slaughter at Ontario Abattoirs	99,582 (incl. dairy)		56,604		609,630	19,274,746	236,529	25,668	1,920	341	417		170	1,461
Slaughter at Federal Plants in Ontario	544,586		16,351		4,620,615	in excess 185 million	72,871							

Notes: The sources of the information include: Statistical Briefers, Red Meat Section AAFC, October 2003 & Statistical Briefers, Canfax Research, September 2003 and 2001 Census of Agriculture & Animal Health Surveillance Network, Surveillance Coverage of Livestock Populations at Risk, October 7, 2003. Most of the statistics are from 2002. Ratite statistics include ostriches, emus and rhea.

Appendix E - Codex Alimentarius Commission Hazard Analysis and Critical Control Point (HACCP) System and Guidelines for Its Application (Annex to CAC/RCP 1-1969, Rev. 3 (1997))

PREAMBLE

The first section of this document sets out the principles of the Hazard Analysis and Critical Control Point (HACCP) system adopted by the Codex Alimentarius Commission. The second section provides general guidance for the application of the system while recognizing that the details of application may vary depending on the circumstances of the food operation[1].

The HACCP system, which is science based and systematic, identifies specific hazards and measures for their control to ensure the safety of food. HACCP is a tool to assess hazards and establish control systems that focus on prevention rather than relying mainly on end-product testing. Any HACCP system is capable of accommodating change, such as advances in equipment design, processing procedures or technological developments.

HACCP can be applied throughout the food chain from primary production to final consumption and its implementation should be guided by scientific evidence of risks to human health. As well as enhancing food safety, implementation of HACCP can provide other significant benefits. In addition, the application of HACCP systems can aid inspection by regulatory authorities and promote international trade by increasing confidence in food safety.

The successful application of HACCP requires the full commitment and involvement of management and the work force. It also requires a multidisciplinary approach; this multidisciplinary approach should include, when appropriate, expertise in agronomy, veterinary health, production, microbiology, medicine, public health, food technology, environmental health, chemistry and engineering, according to the particular study. The application of HACCP is compatible with the implementation of quality management systems, such as the ISO 9000 series, and is the system of choice in the management of food safety within such systems.

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[1] The Principles of the HACCP System set the basis for the requirements for the application of HACCP, while the Guidelines for the Application provide general guidance for practical application.

While the application of HACCP to food safety was considered here, the concept can be applied to other aspects of food quality.

DEFINITIONS

Control (verb): To take all necessary actions to ensure and maintain compliance with criteria established in the HACCP plan.

Control (noun): The state wherein correct procedures are being followed and criteria are being met.

Control measure: Any action and activity that can be used to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Corrective action: Any action to be taken when the results of monitoring at the CCP indicate a loss of control.

Critical Control Point (CCP): A step at which control can be applied and is essential to prevent or eliminate a food safety hazard or reduce it to an acceptable level.

Critical limit: A criterion which separates acceptability from unacceptability.

Deviation: Failure to meet a critical limit.

Flow diagram: A systematic representation of the sequence of steps or operations used in the production or manufacture of a particular food item.

HACCP: A system which identifies, evaluates, and controls hazards which are significant for food safety.

HACCP plan: A document prepared in accordance with the principles of HACCP to ensure control of hazards which are significant for food safety in the segment of the food chain under consideration.

Hazard: A biological, chemical or physical agent in, or condition of, food with the potential to cause an adverse health effect.

Hazard analysis: The process of collecting and evaluating information on hazards and conditions leading to their presence to decide which are significant for food safety and therefore should be addressed in the HACCP plan.

Monitor: The act of conducting a planned sequence of observations or measurements of control parameters to assess whether a CCP is under control.

Step: A point, procedure, operation or stage in the food chain including raw materials, from primary production to final consumption.

Validation: Obtaining evidence that the elements of the HACCP plan are effective.

Verification: The application of methods, procedures, tests and other evaluations, in addition to monitoring to determine compliance with the HACCP plan.

PRINCIPLES OF THE HACCP SYSTEM

The HACCP system consists of the following seven principles:

PRINCIPLE 1

Conduct a hazard analysis.

PRINCIPLE 2

Determine the Critical Control Points (CCPs).

PRINCIPLE 3

Establish critical limit(s).

PRINCIPLE 4

Establish a system to monitor control of the CCP.

PRINCIPLE 5

Establish the corrective action to be taken when monitoring indicates that a particular CCP is not under control.

PRINCIPLE 6

Establish procedures for verification to confirm that the HACCP system is working effectively.

PRINCIPLE 7

Establish documentation concerning all procedures and records appropriate to these principles and their application.

GUIDELINES FOR THE APPLICATION OF THE HACCP SYSTEM

Prior to application of HACCP to any sector of the food chain, that sector should be operating according to the Codex General Principles of Food Hygiene, the appropriate Codex Codes of Practice, and appropriate food safety legislation. Management commitment is necessary for implementation of an effective HACCP system. During hazard identification, evaluation, and subsequent operations in designing and applying HACCP systems, consideration must be given to the impact of raw materials, ingredients, food manufacturing practices, role of manufacturing processes to control hazards, likely end-use of the product, categories of consumers of concern, and epidemiological evidence relative to food safety.

The intent of the HACCP system is to focus control at CCPs. Redesign of the operation should be considered if a hazard which must be controlled is identified but no CCPs are found.

HACCP should be applied to each specific operation separately. CCPs identified in any given example in any Codex Code of Hygienic Practice might not be the only ones identified for a specific application or might be of a different nature.

The HACCP application should be reviewed and necessary changes made when any modification is made in the product, process, or any step.

It is important when applying HACCP to be flexible where appropriate, given the context of the application taking into account the nature and the size of the operation.

APPLICATION

The application of HACCP principles consists of the following tasks as identified in the Logic Sequence for Application of HACCP (Diagram 1).

1. Assemble HACCP team

The food operation should assure that the appropriate product specific knowledge and expertise is available for the development of an effective HACCP plan. Optimally, this may be accomplished by assembling a multidisciplinary team. Where such expertise is not available on site, expert advice should be obtained from other sources. The scope of the HACCP plan should be identified. The scope should describe which segment of the food chain is involved and the general classes of hazards to be addressed (e.g. does it cover all classes of hazards or only selected classes).

2. Describe product

A full description of the product should be drawn up, including relevant safety information such as: composition, physical/chemical structure (including A_w, pH, etc.), microcidal/static treatments (heat-treatment, freezing, brining, smoking, etc.), packaging, durability and storage conditions and method of distribution.

3. Identify intended use

The intended use should be based on the expected uses of the product by the end user or consumer. In specific cases, vulnerable groups of the population, e.g. institutional feeding, may have to be considered.

4. Construct flow diagram

The flow diagram should be constructed by the HACCP team. The flow diagram should cover all steps in the operation. When applying HACCP to a given operation, consideration should be given to steps preceding and following the specified operation.

5. On-site confirmation of flow diagram

The HACCP team should confirm the processing operation against the flow diagram during all stages and hours of operation and amend the flow diagram where appropriate.

6. List all potential hazards associated with each step, conduct a hazard analysis, and consider any measures to control identified hazards

(SEE PRINCIPLE 1)

The HACCP team should list all of the hazards that may be reasonably expected to occur at each step from primary production, processing, manufacture, and distribution until the point of consumption.

The HACCP team should next conduct a hazard analysis to identify for the HACCP plan which hazards are of such a nature that their elimination or reduction to acceptable levels is essential to the production of a safe food.

In conducting the hazard analysis, wherever possible the following should be included:

- the likely occurrence of hazards and severity of their adverse health effects;

- the qualitative and/or quantitative evaluation of the presence of hazards;
- survival or multiplication of microorganisms of concern;
- production or persistence in foods of toxins, chemicals or physical agents; and
- conditions leading to the above.

The HACCP team must then consider what control measures, if any, exist which can be applied for each hazard.

More than one control measure may be required to control a specific hazard(s) and more than one hazard may be controlled by a specified control measure.

7. Determine Critical Control Points

(SEE PRINCIPLE 2)[2]

There may be more than one CCP at which control is applied to address the same hazard. The determination of a CCP in the HACCP system can be facilitated by the application of a decision tree (e.g. Diagram 2), which indicates a logic reasoning approach. Application of a decision tree should be flexible, given whether the operation is for production, slaughter, processing, storage, distribution or other. It should be used for guidance when determining CCPs. This example of a decision tree may not be applicable to all situations. Other approaches may be used. Training in the application of the decision tree is recommended.

If a hazard has been identified at a step where control is necessary for safety, and no control measure exists at that step, or any other, then the product or process should be modified at that step, or at any earlier or later stage, to include a control measure.

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[2] Since the publication of the decision tree by Codex, its use has been implemented many times for training purposes. In many instances, while this tree has been useful to explain the logic and depth of understanding needed to determine CCPs, it is not specific to all food operations, e.g. slaughter, and therefore it should be used in conjunction with professional judgement, and modified in some cases.

8. Establish critical limits for each CCP

(SEE PRINCIPLE 3)

Critical limits must be specified and validated if possible for each Critical Control Point. In some cases more than one critical limit will be elaborated at a particular step. Criteria often used include measurements of temperature, time, moisture level, pH, A_w, available chlorine, and sensory parameters such as visual appearance and texture.

9. Establish a monitoring system for each CCP

(SEE PRINCIPLE 4)

Monitoring is the scheduled measurement or observation of a CCP relative to its critical limits. The monitoring procedures must be able to detect loss of control at the CCP. Further, monitoring should ideally provide this information in time to make adjustments to ensure control of the process to prevent violating the critical limits. Where possible, process adjustments should be made when monitoring results indicate a trend towards loss of control at a CCP. The adjustments should be taken before a deviation occurs. Data derived from monitoring must be evaluated by a designated person with knowledge and authority to carry out corrective actions when indicated. If monitoring is not continuous, then the amount or frequency of monitoring must be sufficient to guarantee the CCP is in control. Most monitoring procedures for CCPs will need to be done rapidly because they relate to on-line processes and there will not be time for lengthy analytical testing. Physical and chemical measurements are often preferred to microbiological testing because they may be done rapidly and can often indicate the microbiological control of the product. All records and documents associated with monitoring CCPs must be signed by the person(s) doing the monitoring and by a responsible reviewing official(s) of the company.

10. Establish corrective actions

(SEE PRINCIPLE 5)

Specific corrective actions must be developed for each CCP in the HACCP system in order to deal with deviations when they occur.

The actions must ensure that the CCP has been brought under control. Actions taken must also include proper disposition of the affected product. Deviation and product disposition procedures must be documented in the HACCP record keeping.

11. Establish verification procedures

(SEE PRINCIPLE 6)

Establish procedures for verification. Verification and auditing methods, procedures and tests, including random sampling and analysis, can be used to determine if the HACCP system is working correctly. The frequency of verification should be sufficient to confirm that the HACCP system is working effectively. Examples of verification activities include:

- Review of the HACCP system and its records;
- Review of deviations and product dispositions; and
- Confirmation that CCPs are kept under control.

Where possible, validation activities should include actions to confirm the efficacy of all elements of the HACCP plan.

12. Establish documentation and record keeping

(SEE PRINCIPLE 7)

Efficient and accurate record keeping is essential to the application of a HACCP system. HACCP procedures should be documented. Documentation and record keeping should be appropriate to the nature and size of the operation.

Documentation examples are:

- Hazard analysis;
- CCP determination;
- Critical limit determination.

Record examples are:

- CCP monitoring activities;
- Deviations and associated corrective actions;
- Modifications to the HACCP system.

An example of a HACCP worksheet is attached as Diagram 3.

TRAINING

Training of personnel in industry, government and academia in HACCP principles and applications, and increasing awareness of consumers are essential elements for the effective implementation of HACCP. As an aid in developing specific training to support a HACCP plan, working instructions and procedures should be developed which define the tasks of the operating personnel to be stationed at each Critical Control Point.

Cooperation between primary producer, industry, trade groups, consumer organizations, and responsible authorities is of vital importance. Opportunities should be provided for the joint training of industry and control authorities to encourage and maintain a continuous dialogue and create a climate of understanding in the practical application of HACCP.

DIAGRAM 1. LOGIC SEQUENCE FOR THE APPLICATION OF HACCP

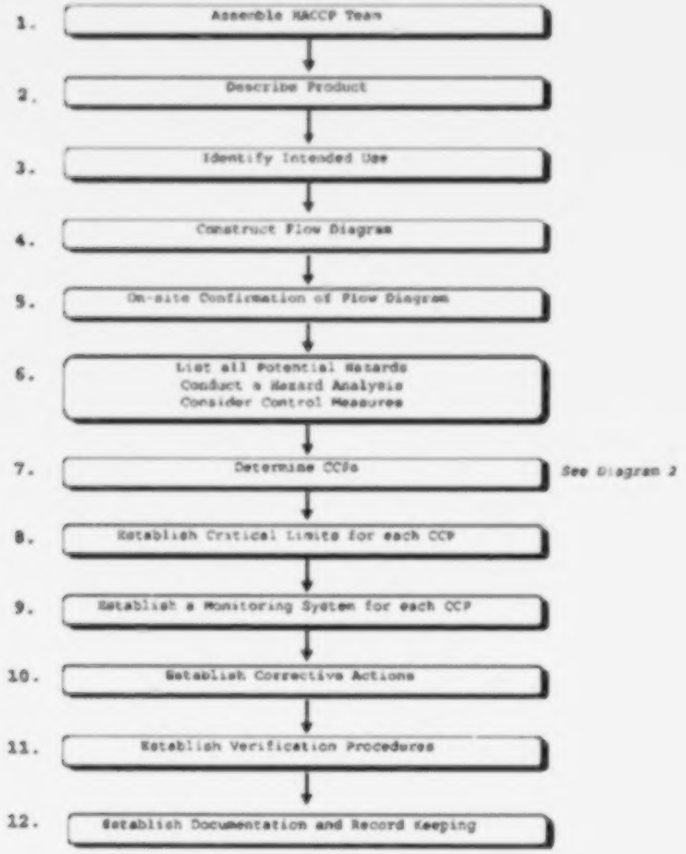
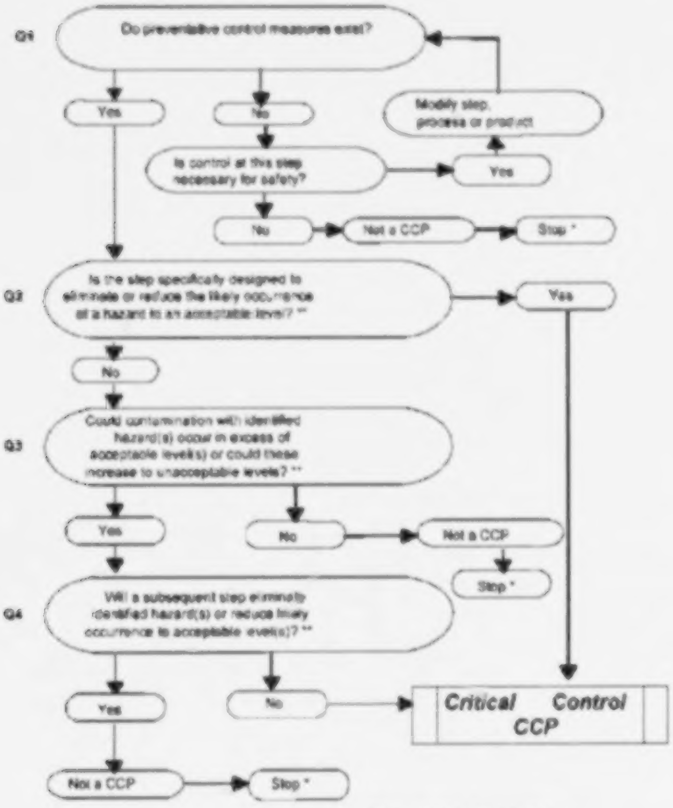

1. Assemble HACCP Team
2. Describe Product
3. Identify Intended Use
4. Construct Flow Diagram
5. On-site Confirmation of Flow Diagram
6. List all Potential Hazards
Conduct a Hazard Analysis
Consider Control Measures
7. Determine CCPs
See Diagram 2
8. Establish Critical Limits for each CCP
9. Establish a Monitoring System for each CCP
10. Establish Corrective Actions
11. Establish Verification Procedures
12. Establish Documentation and Record Keeping

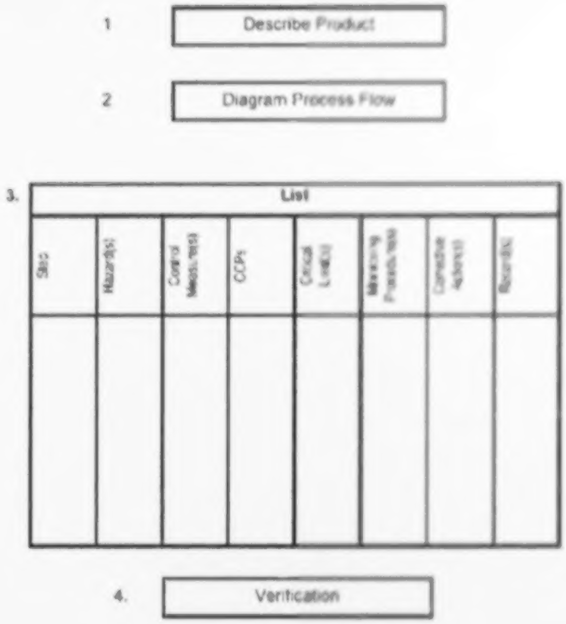
DIAGRAM 2. EXAMPLE OF DECISION TREE TO IDENTIFY CCPs (answer questions in sequence)


Q1
Do preventative control measures exist?
Yes
No
Modify step, process or product
Is control at this step necessary for safety?
Yes
No
Not a CCP
Stop *
Q2
Is the step specifically designed to eliminate or reduce the likely occurrence of a hazard to an acceptable level? **
Yes
No
Q3
Could contamination with identified hazard(s) occur in excess of acceptable level(s) or could these increase to unacceptable levels? **
Yes
No
Not a CCP
Stop *
Q4
Will a subsequent step eliminate identified hazard(s) or reduce likely occurrence to acceptable level(s)? **
Yes
No
Critical Control CCP
Not a CCP
Stop *

* Proceed to the next identified hazard in the described process

** Acceptable and unacceptable levels need to be determined within the overall objectives in identifying the CCPs of the HACCP plan

DIAGRAM 3. EXAMPLE OF A HACCP WORKSHEET



Appendix F - An Assessment of Biological, Chemical and Physical Hazards, Sources of the Hazards, Possible Interventions Associated with Production of Raw Food of Animal Origin During the Slaughter, Processing, Retail Distribution and Food Service Phases

A recent report prepared for Health Canada related to the production of raw food of animal origins contains a helpful outline of the biological, chemical and physical hazards, their sources and possible interventions.

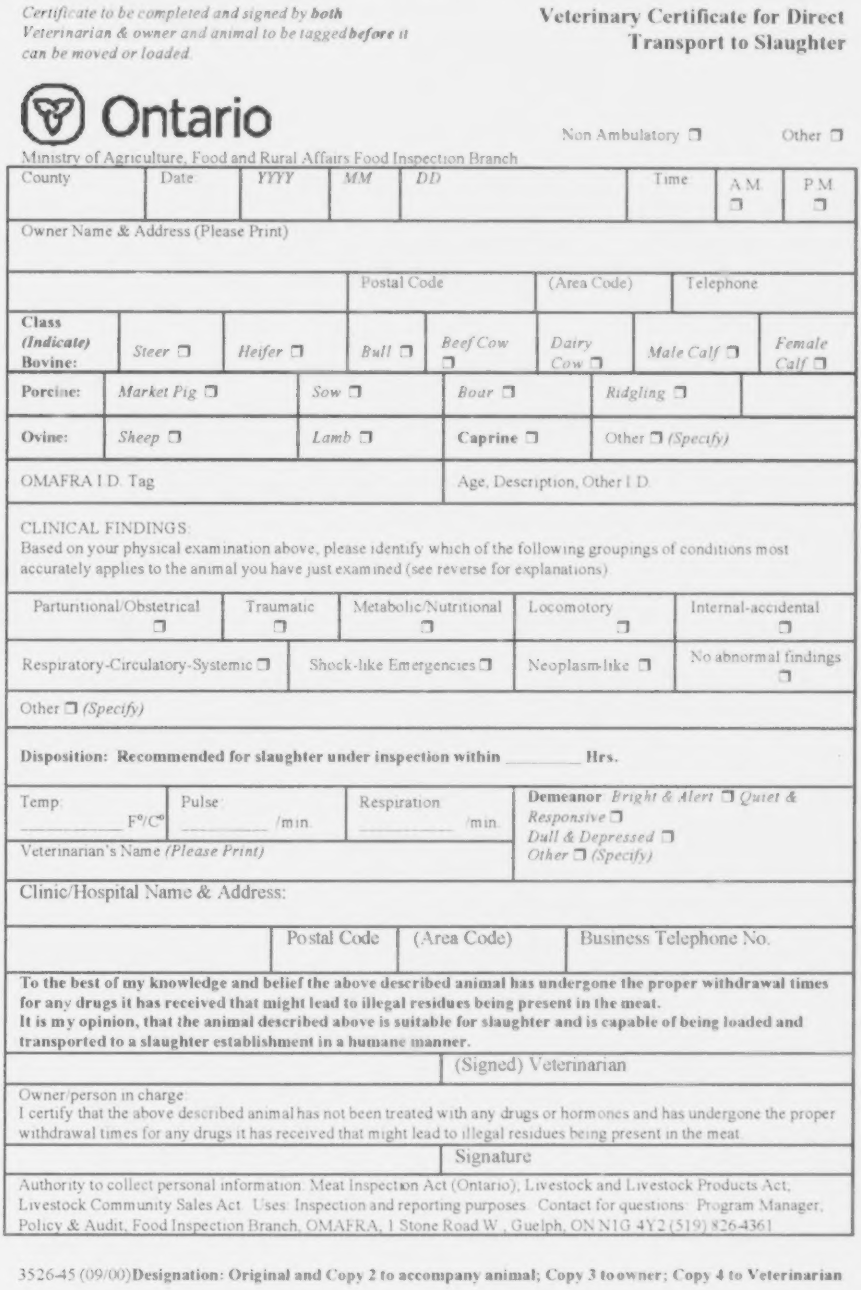
Phase	Component of Risk Assessment	Commodity	Examples of Hazards	Source / Intervention
SLAUGHTER	Biological	Beef	- Escherichia coli (O157:H7) - Listeria monocytogenes - Salmonella spp. - Clostridium spp.	- Carcass pasteurization - Steam vacuuming - Proper hide removal - Chemical sprays and rinses e.g. chlorine dioxide, acid rinse - Rapid chilling - Hot water wash - Good sanitation practices - Good hygiene practices
		Poultry	- Camplyobacter spp. - Salmonella spp. - Clostridium spp.	
		Pork	- Salmonella spp. - Yersinia enterocolitica - Trichinae sp.	
		All	- Pests Birds, flies, rodents carrying pathogens	
	Chemical	All	- Pharmaceutical residues - Pesticides - Allergens - Agricultural chemicals - Sanitation chemicals - Packaging films	- On farm education - Chemical testing - Approved films - Surveillance and monitoring - Sanitation SOPs and chemical backups
	Physical	All	- Broken injection needles - Carcass metal tags - Head shot - Knife chips - Bone fragments - Wood slivers	- Visual by buyer - Visual on farm, tag the animal - On-farm education - Deboners on grinders - No wood pallets in the process

PROCESSING	Biological	Beef	- Escherichia coli (O157:H7) - Salmonella spp. - Listeria monocytogenes - Clostridium spp. - Cysyicurbus bovis	Source: - Raw material - Poorly designed facilities and equipment - Poor hygiene Poor sanitation - Cross contamination - Contaminated water Intervention: - Good GMPs - Ingredients - Good hygienic practices - Good sanitation practices - Proper design of facilities and equipment - Good temperature control - Good processing criteria
		Poultry	- Salmonella spp. - Campylobacter spp. - Clostridium spp.	
		Pork	- Salmonella spp. - Yersinia spp. - Trichinella spiralis	
		All	- Staphylococcus aureus - Birds, flies and rodents which can carry pathogens	
	Chemical	All	- Allergen cross contamination - Pharmaceutical residues - Pesticides - Growth promotants - Chemical residues e.g. sanitation	Source: - Raw material - Feed - Water - Improper use e.g. fail to follow directions Intervention: - Farm food safety programs - Good sanitation - Government evaluation and approval - Good sanitation practices - Rapid test kits e.g. allergens

	Physical	All	- Foreign objects e.g. gloves, hair, bone, metal - Injection needles - Packaging materials - Wood e.g. pallets	Source: - Raw material - Employee carelessness - Poorly maintained equipment Intervention: - Covered containers - Metal detectors - Preventative maintenance programs - Trace back systems - Employee training
RETAIL	Biological	Beef Poultry Pork Fish (retail product)	- Temperature fluctuations - Cross contamination - Hepatitis A virus - Norwalk virus - Air borne pathogens	- Maintenance of cold chain; monitoring - Separate work stations and/or cleaning and sanitizing between species - Sanitation protocol Staff training
	Chemical	All	- Antibiotics - Pesticides - Allergens - Nitrite Salt - Ag. Chemicals - Sanitation - Chemicals	- Surveillance and monitoring - Public Health visual surveillance at establishment level - Sanitation SOPs - Regulatory controls - Government approved products and processes
	Physical	All	- Injection needles - Foreign materials - Bone fragments	- Perform sensory evaluation - Metal detectors - Industry Programs to address foreign materials - Code dating

DISTRIBUTION	Biological	All	- Meat products carried by CCGD food service members are received and sold by frozen case lot - Some food service distributors also handle fresh ground meat	- Temperature control maintained
	Chemical	All	- As above	
	Physical	All	- Sold to end user (restaurant) in frozen case to be inspected by final user	- Perform sensory evaluation
FOOD SERVICE	Biological	All	- Bacterial: - Salmonella spp. - E. coli - Campylobacter sp. - Yersinia sp. - C. botulinum - Listeria monocytogenes - Viral: - Norwalk - Hepatitis A - Parasites: - Anisakis sp. - Toxin: - Scombroid - PSP - DSP	- Incoming products, particularly raw foods, infected food handlers, cross contamination. - Safe food handling procedures, e.g. cooking, cooling, reheating, cross contamination control, good personal hygiene
	Chemical	All	- e.g. sanitizers, cleaners, pesticides	Sources: - Agents used in the establishment. Interventions: - Safe handling, storage and application procedures; education of staff.
	Physical	All	- e.g. allergens, hair, foreign material	Sources: - Food service environment. Interventions: - Education of staff, particularly of allergen hazards, sanitation/quality control.

Appendix G – Veterinary Certificate for Direct Transport to Slaughter



Certificate to be completed and signed by ***both*** *Veterinarian & owner and animal to be tagged* ***before*** *it can be moved or loaded.*

Veterinary Certificate for Direct Transport to Slaughter

Ontario
Ministry of Agriculture, Food and Rural Affairs Food Inspection Branch

Non Ambulatory ☐ Other ☐

County	Date	*YYYY*	*MM*	*DD*	Time	A.M. ☐	P.M. ☐

Owner Name & Address (Please Print)

	Postal Code	(Area Code)	Telephone

Class *(Indicate)* Bovine:	*Steer* ☐	*Heifer* ☐	*Bull* ☐	*Beef Cow* ☐	*Dairy Cow* ☐	*Male Calf* ☐	*Female Calf* ☐
Porcine:	*Market Pig* ☐	*Sow* ☐	*Boar* ☐	*Ridgling* ☐			
Ovine:	*Sheep* ☐	*Lamb* ☐	**Caprine** ☐	Other ☐ *(Specify)*			

OMAFRA I.D. Tag	Age, Description, Other I.D.

CLINICAL FINDINGS:
Based on your physical examination above, please identify which of the following groupings of conditions most accurately applies to the animal you have just examined (see reverse for explanations).

Parturitional/Obstetrical ☐	Traumatic ☐	Metabolic/Nutritional ☐	Locomotory ☐	Internal-accidental ☐
Respiratory-Circulatory-Systemic ☐	Shock-like Emergencies ☐	Neoplasm-like ☐	No abnormal findings ☐	

Other ☐ *(Specify)*

Disposition: Recommended for slaughter under inspection within ________ Hrs.

Temp: __________ F°/C° | Pulse: __________ /min. | Respiration: __________ /min.

Demeanor: *Bright & Alert* ☐ *Quiet & Responsive* ☐
Dull & Depressed ☐
Other ☐ *(Specify)*

Veterinarian's Name *(Please Print)*

Clinic/Hospital Name & Address:

	Postal Code	(Area Code)	Business Telephone No.

To the best of my knowledge and belief the above described animal has undergone the proper withdrawal times for any drugs it has received that might lead to illegal residues being present in the meat.
It is my opinion, that the animal described above is suitable for slaughter and is capable of being loaded and transported to a slaughter establishment in a humane manner.

(Signed) Veterinarian

Owner/person in charge:
I certify that the above described animal has not been treated with any drugs or hormones and has undergone the proper withdrawal times for any drugs it has received that might lead to illegal residues being present in the meat.

Signature

Authority to collect personal information: Meat Inspection Act (Ontario); Livestock and Livestock Products Act; Livestock Community Sales Act. Uses: Inspection and reporting purposes. Contact for questions: Program Manager, Policy & Audit, Food Inspection Branch, OMAFRA, 1 Stone Road W., Guelph, ON N1G 4Y2 (519) 826-4361

3526-45 (09/00)**Designation: Original and Copy 2 to accompany animal; Copy 3 to owner; Copy 4 to Veterinarian**

Appendix H - Commencement of Mandatory Meat Inspection in Ontario

Exempt as of April 1, 1967	**Exempt as of Oct. 30, 1967**	**Exempt as of Jan. 15, 1968**	**Exempt as of March 17, 1969**	**Exempt as of June 22, 1970**
Counties	*Counties*	**Counties**	**Counties**	**Counties**
Carleton	Carleton	Carleton		
Dundas	Dundas	Dundas		
Durham	Durham			
Frontenac	Frontenac	Frontenac		
Glengarry	Glengarry	Glengarry		
Grenville	Grenville	Grenville		
Hastings	Hastings	Hastings		
Lanark	Lanark	Lanark		
Leeds	Leeds	Leeds		
Lennox and Addington	Lennox and Addington	Lennox and Addington		
Northumberland	Northumberland	Northumberland		
Ontario	Ontario			
Peterborough	Peterborough			
Prescott	Prescott	Prescott		
Prince Edward	Prince Edward	Prince Edward		
Renfrew	Renfrew	Renfrew		
Russell	Russell	Russell		
Simcoe				
Stormont	Stormont	Stormont		
Victoria	Victoria			
York				
Provisional County of Haliburton	Provisional County of Haliburton	Provisional County of Haliburton	Provisional County of Haliburton	
Territorial District	**Territorial District**	**Territorial District**	**Territorial District**	**Territorial District**
Algoma	Algoma	Algoma	Algoma	
Cochrane	Cochrane	Cochrane	Cochrane	
Kenora	Kenora	Kenora	Kenora	
Manitoulin	Manitoulin	Manitoulin	Manitoulin	
Muskoka	Muskoka	Muskoka	Muskoka	
Nipissing	Nipissing	Nipissing	Nipissing	
Parry Sound	Parry Sound	Parry Sound	Parry Sound	
Rainy River	Rainy River	Rainy River	Rainy River	
Sudbury	Sudbury	Sudbury	Sudbury	
Thunder Bay	Thunder Bay	Thunder Bay	Thunder Bay	
Timiskaming	Timiskaming	Timiskaming	Timiskaming	

Note: Inspection of slaughter was made mandatory as of April 1, 1967 with the addition of "*no person shall slaughter an animal, except in the manner and by the devices prescribed in the regulations*" to the *Meat Inspection Act (Ontario), 1962-63* due to the requirement for inspection contained in *Regulation made under the Meat Inspection Act (Ontario), 1962-63, O.Reg. 2065*, filed January 22, 1965.

Regulations made under the Meat Inspection Act (Ontario), 1962-63:

- *O.Reg. 106/67*, filed March 23, 1967
- *O.Reg. 378/67*, filed October 30, 1967
- *O.Reg. 8/68*, filed January 15, 1968
- *O.Reg. 84/69*, filed March 17, 1969
- *O.Reg. 275/70*, filed June 22, 1970 revoked 106/67, 378/67, 8/68, and 84/69

Appendix I - Slaughter Statistics for Provincially Inspected Abattoirs in Ontario

YEAR	NUMBER OF RED MEAT SPECIES ANIMALS SLAUGHTERED	NUMBER OF WHITE MEAT SPECIES ANIMALS SLAUGHTERED
1999	1,020,597	23,897,139
2000	966,578	19,246,866
2001	973,868	20,130,159
2002	1,023,445	19,274,740
2003	1,026,071	18,943,376

NOTES:

Red Meat Species slaughtered include, but were not limited to BBQ hogs, boars, buffalo, bulls, female calves, male calves, cows, elk, exotic, fallow deer, goats, heifers, lambs, market hogs, ratites, red deer, ridgling, sheep, sows, stags, steers, wild boars

White Meat Species slaughtered include, but were not limited to chickens, Cornish hens, ducks, fancy poultry, fowl, geese, guinea fowl, partridge, pheasants, pigeons, quail, rabbits, silkies, and turkeys

3526-45 (09/00)**Designation: Original and Copy 2 to accompany animal; Copy 3 to owner; Copy 4 to Veterinarian**

Appendix J – Letter Inviting Submissions

THE MEAT INSPECTION REVIEW
The Honourable Roland J. Haines

80 Dundas St., 2^{nd} Floor, Unit "Q"
London, ON N6A 1E7

Tel: ***(519) 660-2700***
Fax: (519) 660-2709
Website: www.meatinspectionreview.com

RE: MEAT INSPECTION REVIEW

I have been authorized by the government of Ontario to review the meat regulatory and inspection regimes, including free standing meat processors, in order to strengthen public health and safety and business confidence.

This Review is **not** a public inquiry and, therefore, there will be no public hearings where testimony is taken under oath.

The mandate I have been given requires me to review regulatory standards, including existing legislation, and the interface among inspection, compliance and enforcement. I have been asked to make recommendations on approaches that might be taken to strengthen the meat inspection system, including strategies for harmonization with the government of Canada, which shares responsibility for meat inspection with the Ontario government.

In conducting this Review I am permitted to request information from any source and am interested in hearing from anyone who has any concerns about meat safety in Ontario and the current meat inspection regime.

I am advised that you have a potential interest in the subject matter of this Review. I am, therefore, inviting you to provide us with any information you have that may be relevant and to forward any written submissions you may wish to make with respect to the issues you believe I should be addressing in order to fulfill the mandate that I have been given.

REVIEW INTO THE MEAT REGULATORY AND INSPECTION REGIMES IN ONTARIO

The Order in Council that sets out my mandate and the Information Sheet relating to written submissions can be found on the Review's website.

Since my written report is expected by April 30, 2004 I will require your response by no later than March 15, 2004.

Yours truly,

The Honourable Roland J. Haines

RJH:jb

Appendix K - List of Individuals and Groups Who Provided Written Submissions to the Review[1]

(in alphabetical order)

Abate Rabbit Packers Ltd.
Animal Alliance of Canada
Association of Ontario Chicken Processors
Barron Poultry Limited
Canadian Culinary Federation
Canadian Federation of Humane Societies
Canadian Meat Council
Canadian Poultry and Egg Processors Council
Canadian Supply Chain Food Safety Coalition
Canadian Veterinary Medical Association
Carol Libman
Carol Winter
Chicken Farmers of Ontario
College of Veterinarians of Ontario
Dairy Farmers of Ontario
David McDowell
DeBoer's Poultry Inc.
Desboro Fur Farms
Ed Peconi & Sons Ltd.
Elizabeth Locke
Grand River Poultry
Holly Park Meat Packers Inc.
Humane Society of Canada
Jain Society of Toronto on Ontario Multifaith Council on Spiritual and Religious Care
Joseph MacDonald
Judith Rinfret
Ken Horst
Machabee Animal Food Ltd.
Max Burt
Michael Hermiston
Mill Creek Farm

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[1] A number of individuals elected to provide written submissions to the Review on the condition that their submissions would remain confidential. In accordance with their wishes, their names have not been included in this list. In addition, others provided comments in private meetings and they have not been listed in keeping wth the private nature of the meetings.

Milton Scheel Packers
National Farmers Union - Ontario
Nick's Abattoir
Ontario Cattlemen's Association
Ontario Federation of Agriculture
Ontario Federation of Anglers and Hunters
Ontario Ministry of Natural Resources
Ontario Pork Producers' Marketing Board
Ontario Public Service Employees Union
Ontario Sheep Marketing Agency
Ontario Society for the Prevention of Cruelty to Animals
Ontario Veal Association
Otonabee Meat Packers
People's Meat Market
Randal Leavitt
Teggart Farms
Temiskaming Agricultural Development Association
Timiskaming Health Unit
Turkey Farmers of Ontario
Town and Country Meats and Abattoir
Valtoudis Brothers Meat Packers
Vanessa Meats

Appendix L – Public Meeting in Peterborough – March 24, 2004

THE MEAT INSPECTION REVIEW
The Honourable Roland J. Haines

Review into the Meat Regulatory and
Inspection Regimes in Ontario

Public Meeting in Peterborough
March 24, 2004
REVISED AGENDA

City Council Chamber, 500 George Street North,
Peterborough, Ontario

9:30am to 1:00 pm and from 2:15pm to 5:00pm

Time	**Speaker**
9:30 a.m.	Opening Remarks by The Honourable Mr. Justice Haines
9:40 a.m.	OMAF - Ontario Ministry of Agriculture and Food - **Dr. Deb Stark, Deputy Minister**, Food Industry Division
9:45 a.m.	OMNR - Ontario Ministry of Natural Resources - Mike Kindree, Manager, Evaluation & Special Services Unit
10:15 a.m.	OPSEU - Ontario Public Service Employees Union - Leah Casselman, President - Tim Hadwen, General Counsel - Brian Burdick, OMAF Meat Hygiene Officer - Doug Peebles, Co-Chair of OMAF Ministry of Enforcement and Renewal Committee
10:45 a.m.	*MORNING BREAK*
11:00 a.m.	ABP Recycling Inc. - Joe Kosalle, General Manager
11:15 a.m.	Ed Peconi & Sons Ltd. - Don Montague
11:30 a.m.	OMOHLTC - Ontario Ministry of Health and Long-Term Care - Fred Ruf, Acting Coordinator, Food Safety and Safe Water Unit
12:00 a.m.	Ontario Federation of Anglers and Hunters - Michael Reader, Executive Director

12:10 a.m Town & Country Farms Inc.
- Mario Henry, owner

12:30 p.m. to 2:15 p.m. **LUNCH BREAK**

Time	**Speaker**
2:15 p.m.	Otonabee Meat Packers - **Joe** Taylor, **co**-owner
2:30 p.m.	Great North Premium Foods - Hank Albers, operator - Rick Albers - **Melissa Wilkenson**
2:45 p.m.	Animal Alliance of Canada - Liz White, Director Canadian Coalition for Farm Animals - Stephanie Brown
3:30 p.m.	Heinz Frankfurt
3:45 p.m.	Paul McQueen
4:00 p.m.	Joanne O'Hara
4:20 p.m.	Holly Park Meat Packers Inc. - Mary Vacca - Tony Facciolo, Vice-President

Note: Items in bold indicate the agenda as the meeting proceeded.

Appendix M – Public Meeting in London – March 31, 2004

THE MEAT INSPECTION REVIEW
The Honourable Roland J. Haines

Review into the Meat Regulatory and Inspection Regimes in Ontario

Public Meeting in London
March 31, 2004

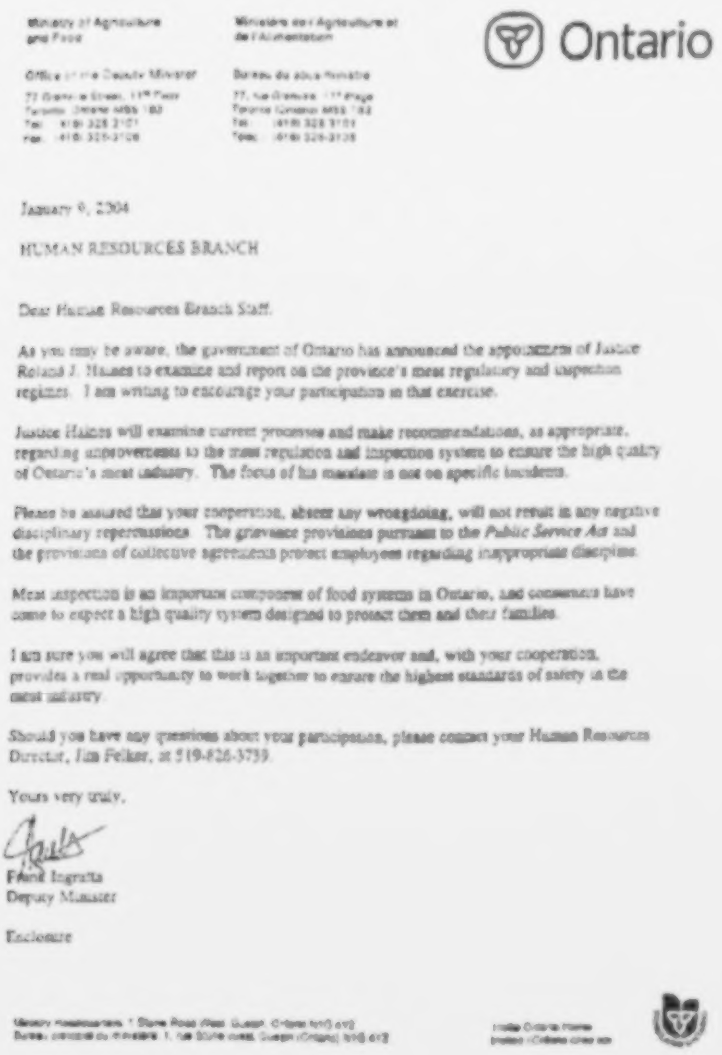
City Council Chamber, 300 Dufferin Avenue,
London, Ontario

9:30am to 1:00 pm and from 2:15pm to 5:00pm

Time	**Speaker**	
9:30 a.m.	Opening Remarks by The Honourable Roland J. Haines	
9:40 a.m.	OMAF	- Ontario Ministry of Agriculture and Food - Dr. Deb Stark, Acting Deputy Minister
9:45 a.m.	OMNR	- Ontario Ministry of Natural Resources - Mike Kindree, Manager, Evaluation & Special Services Unit
10:15 a.m.	OIMP	- Ontario Independent Meat Processors - Laurie Nichol, Executive Director
10:45 a.m.	NFU	- National Farmers Union - Ann Slater
11:05 a.m.	OSPCA	- Ontario Society for the Prevention of Cruelty to Animals - Michael Draper, Chief Inspector
11:40 a.m.	OPSEU	- Ontario Public Service Employees Union - Ron Elliot, Regional Vice President of OPSEU - Doug Peebles, Co-Chair of OMAF Ministry Employee Relations Committee - Robert Lowry, OMAF Meat Hygiene Officer (ie. meat inspector) - Tim Hadwen, OPSEU General Counsel
12:15 a.m.	CMC	- Canadian Meat Council - James M. Laws, P.Ag., Executive Director - Carla Abbatemarco, Technical Director
1:00 p.m. to 2:15 p.m.		**LUNCH BREAK**

Time	**Speaker**	
2:15 p.m.	Toronto Public Health Unit	- Sylvanus Thompson, Quality Assurance Manager - Jane Urquhart, Food Safety Manager, Healthy Environments
2:45 p.m.	alPHa	- Association of Local Public Health Agencies - Andy Papadopoulos, Executive Director
3:00 p.m.	CIPHI	- Canadian Institute of Public Health Inspectors, Ontario Branch Inc. - Brad Colpitts, Food Safety Chair of Branch Executive
3:15 p.m.	ASPHIO	- Association of Supervisors of Public Health Inspectors of Ontario - Ron De Burger - Pamela Scharfe, Manager of Environment Programs, Huron County Health Unit - Jim Reffle, Director of Environmental Health & Chronic Disease Prevention, Middlesex-London Health Unit
3:45 p.m.	OFA	- Ontario Federation of Agriculture - Paul Mistlele, Executive Director, OFA - Ian McKillop, Vice President of Ontario Cattlemen's Association
4:05 p.m.	John Gault	
4:20 p.m.	NFU	- National Farmers Union, Perth / Oxford Local - Bruce Hunter - Robert Passmore
4:45 p.m.	Islamic Society of North America-Canada	- Mohammad Ashraf, Ph.D., Secretary General
5:15 p.m.	Lantz Meat Market	- Steven Lantz, operator

Appendix N - Documents Relating to Reprisal Protection



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Ontario

January 9, 2004

HUMAN RESOURCES BRANCH

Dear Human Resources Branch Staff,

As you may be aware, the government of Ontario has announced the appointment of Justice Roland J. Haines to examine and report on the province's meat regulatory and inspection regimes. I am writing to encourage your participation in that exercise.

Justice Haines will examine current processes and make recommendations, as appropriate, regarding improvements to the meat regulation and inspection system to ensure the high quality of Ontario's meat industry. The focus of his mandate is not on specific incidents.

Please be assured that your cooperation, absent any wrongdoing, will not result in any negative disciplinary repercussions. The grievance provisions pursuant to the *Public Service Act* and the provisions of collective agreements protect employees regarding inappropriate discipline.

Meat inspection is an important component of food systems in Ontario, and consumers have come to expect a high quality system designed to protect them and their families.

I am sure you will agree that this is an important endeavor and, with your cooperation, provides a real opportunity to work together to ensure the highest standards of safety in the meat industry.

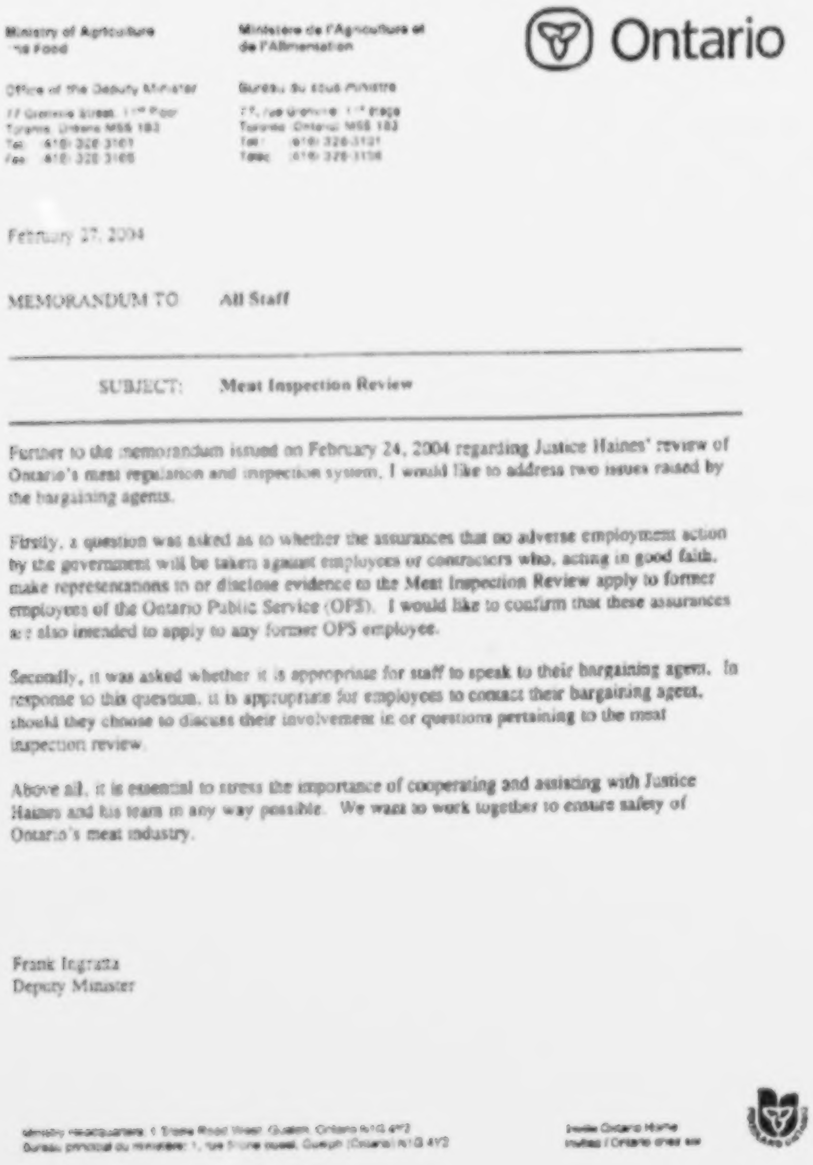
Should you have any questions about your participation, please contact your Human Resources Director, Jim Felker, at 519-826-3739.

Yours very truly,

Frank Ingratta
Deputy Minister

Enclosure

Ministry Headquarters: 1 Stone Road West, Guelph, Ontario N1G 4Y2
Bureau principal du ministère: 1, rue Stone ouest, Guelph (Ontario) N1G 4Y2



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Téléc : (416) 326-3106

Ontario

February 27, 2004

MEMORANDUM TO **All Staff**

SUBJECT: **Meat Inspection Review**

Further to the memorandum issued on February 24, 2004 regarding Justice Haines' review of Ontario's meat regulation and inspection system, I would like to address two issues raised by the bargaining agents.

Firstly, a question was asked as to whether the assurances that no adverse employment action by the government will be taken against employees or contractors who, acting in good faith, make representations to or disclose evidence to the Meat Inspection Review apply to former employees of the Ontario Public Service (OPS). I would like to confirm that these assurances are also intended to apply to any former OPS employee.

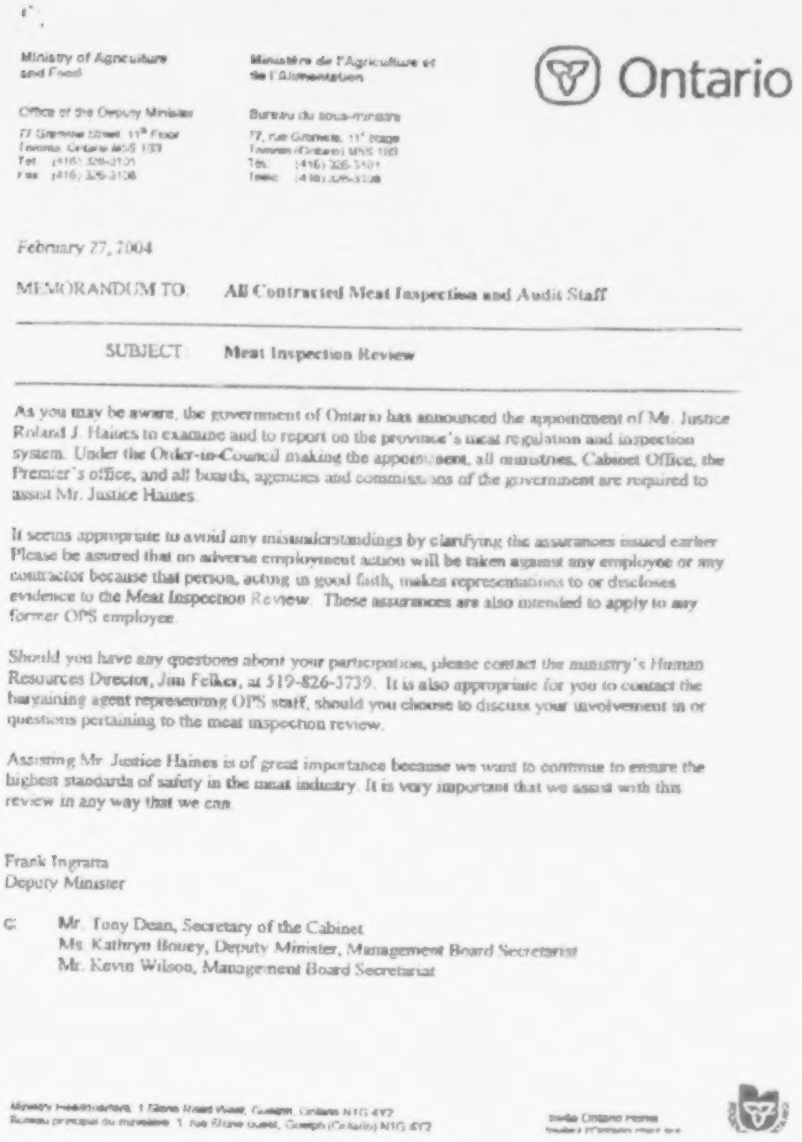
Secondly, it was asked whether it is appropriate for staff to speak to their bargaining agent. In response to this question, it is appropriate for employees to contact their bargaining agent, should they choose to discuss their involvement in or questions pertaining to the meat inspection review.

Above all, it is essential to stress the importance of cooperating and assisting with Justice Haines and his team in any way possible. We want to work together to ensure safety of Ontario's meat industry.

Frank Ingratta
Deputy Minister

Ministry Headquarters: 1 Stone Road West, Guelph, Ontario N1G 4Y2
Bureau principal du ministère: 1, rue Stone ouest, Guelph (Ontario) N1G 4Y2

Invite Ontario Home
Invitez l'Ontario chez soi



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Ontario

February 27, 2004

MEMORANDUM TO: **All Contracted Meat Inspection and Audit Staff**

SUBJECT: **Meat Inspection Review**

As you may be aware, the government of Ontario has announced the appointment of Mr. Justice Roland J. Haines to examine and to report on the province's meat regulation and inspection system. Under the Order-in-Council making the appointment, all ministries, Cabinet Office, the Premier's office, and all boards, agencies and commissions of the government are required to assist Mr. Justice Haines.

It seems appropriate to avoid any misunderstandings by clarifying the assurances issued earlier. Please be assured that no adverse employment action will be taken against any employee or any contractor because that person, acting in good faith, makes representations to or discloses evidence to the Meat Inspection Review. These assurances are also intended to apply to any former OPS employee.

Should you have any questions about your participation, please contact the ministry's Human Resources Director, Jim Felker, at 519-826-3739. It is also appropriate for you to contact the bargaining agent representing OPS staff, should you choose to discuss your involvement in or questions pertaining to the meat inspection review.

Assisting Mr. Justice Haines is of great importance because we want to continue to ensure the highest standards of safety in the meat industry. It is very important that we assist with this review in any way that we can.

Frank Ingratta
Deputy Minister

c: Mr. Tony Dean, Secretary of the Cabinet
Ms. Kathryn Bouey, Deputy Minister, Management Board Secretariat
Mr. Kevin Wilson, Management Board Secretariat

Appendix O - Biographies of Reviewers of the Expert Advisory Panel Report

John Blatherwick, M.D., has been the Medical Health Officer in Vancouver since March 1984 and is the Chief Medical Health Officer of the Vancouver Coastal Health Authority. Prior to coming to Vancouver, he was the Medical Health Officer in the Simon Fraser Health Unit for nine years. He started in public health with the Vancouver Health Department in 1971, leaving a residency in Internal Medicine at Vancouver General Hospital to se up the Pine Street Youth Clinic. He left Vancouver in 1974 to take his Diploma in Public Health at the University of Toronto and to complete his Fellowship in Public Health at UBC. Dr. Blatherwick served in the Canadian Forces reserves for 39 years in total retiring in 2000. He retired with the rank of Commander and was the Senior Naval Reserve Medical Advisor when he retied. He was Canada's representative to the NATO Reserve Medical Officers' Congress form 1989 to 1995 and received only their sixth gold medal. Dr. Blatherwick has published 18 books, mainly about airplanes and about civilian and military medals. Dr. Blatherwick was awarded the Order of Canada in 1994 for his work in public health and received an award as a Canadian Health Hero from the Pan American Health Organization in 2002.

Larry Copeland, is Director, Food Protection Services, British Columbia Centre for Disease Control, Ministry of Health, British Columbia. Mr. Copeland's office is responsible for providing the Ministry of Health with the scientific advice the Ministry requires to develop provincial policy and legislation governing the safety of the province's food supply. As well, it provides similar specialized scientific resources to the regional Health Authorities to assist them in their mandate of administering/enforcing provincial food safety policy and legislation within their jurisdiction. Additional related services include undertaking necessary research, providing education/training programs, developing information management programs and collecting/analyzing data concerning food borne hazards/illnesses contributing to the burden of morbidity and mortality in the British Columbia population. Mr. Copeland's office is as well directly responsible for administering the provisions 3 provincial food safety Acts governing abattoirs, dairy and fish processing plants. This includes provision of licensing, inspection and enforcement services to support the regulatory requirements under these Acts.

Gordon Dittberner, B.V.Sc., is a veterinary science graduate of the University of Pretoria. After leaving South Africa in 1966, he practiced in the United Kingdom for almost a year and then immigrated to Canada. He was a partner in a small animal practice in Calgary for 6 years, before beginning his career with Agriculture Canada as a field veterinarian in the Calgary District Office in 1974. In 1977 he moved to Ottawa where he accepted a variety of positions with Agriculture Canada related to regulatory veterinary medicine. In 1986 he was appointed the Veterinary Director General and then in 1991 the Assistant Deputy Minister, Corporate Services Branch, Agriculture and Agri-food Canada. In 1998, Dr. Dittberner retired from the federal government and founded AgriVet International, specializing in agriculture, veterinary and management consulting. His clients have included Health Canada, Agriculture and Agri-food Canada and the Canadian Veterinary Medical Association, as well as the National and Provincial Departments of Agriculture in South Africa.

Pat Dodsworth, is Director, Quality Assurance and Food Safety, Schneider Foods.

Kathryn Doré, B.Sc., M.H.Sc., is Senior Epidemiologist and A/Manager: Surveillance Section, Food-borne, Water-borne and Zoonotic Infections Divisions, Health Canada and Adjunct Professor, Department of Population Medicine, University of Guelph.

Sandra Fulton, is President, Fulton Food Safety Consultants, Rockwood, Ontario, a firm that specializes in regulatory requirements for the food industry and provides practical "hands-on" services to industry and government in HACCP development, auditing, on-site training, plant design and federal approvals. In 2002-03, her firm developed and delivered Further Meat Processing training to OMAF's inspection staff, and developed the HACCP approach (standards) for OMAF's HACCP Advantage Program. Ms. Fulton started her career with CFIA in 1980 as a federal meat inspector and worked progressively to the position of Area Supervisor for meat processing inspectors. Prior to resigning her position in 1998, Sandra held the position of Program Specialists, Blueprints, Plants and Equipment for the Ontario Region and was responsible for licensing, evaluating blueprints, enforcement, providing interpretation and direction to industry and inspection staff on standards, training inspection staff and auditing 60 establishments annually for compliance. In 1999, Ms. Fulton was contracted by the CFISIG to develop the 16-chapter Code for the National Meat & Poultry Regulations.

John Groenewegen, Ph.D., is President of JRG Consulting Group, a firm dedicated to providing consulting services to the agri-food sector. Dr Groenewegen has a key role in providing consulting services to governments, industry associations and agri-business firms on issues such as business strategy, competitiveness, farm policy, trade policy, grain sector issues, horticultural, and livestock and poultry sector issues. In the food safety area, he has been involved in projects related to the costs of compliance with meat standards by abattoirs, developing an inventory of free standing meat plants, reducing the barriers to HACCP adoption in the meat industry, and an audit of a food safety program. Dr. Groenewegen was a partner with Deloitte & Touche Consulting Group responsible for the agri-food consulting practice (focusing on strategy, economics and policy issues). Prior to his consulting career, Agriculture Canada employed him as a policy analyst, and was on staff at the Unites States Department of Agriculture in agricultural policy. Dr. Groenewegen obtained his Ph.D. in Agriculture and Applied Economics from the University of Minnesota, and his B.Sc. (Agri) and M.Sc. in Agricultural Economics from the University of Guelph. John is also a Certified Management Consultant (CMC).

Sylvain Quessy, D.M.V., Ph.D. , is Industrial Chair on Meat Hygiene, Associate Professor, Département de pathologie et Microbiologie, Faculté de médecine vétérinaire, Université de Montréal. Dr. Quessy is a graduate of the University of Montreal (DVM, 1984). He worked as a private practitioner and as a meat hygienist for Canadian Food Inspection Agency (CFIA) before the completion of his PhD in microbiology and immunology (Montreal, 1994). He then worked for Health Canada as scientific researcher and head of environmental microbiology section of the Health of Animals and Food Laboratory at St.-Hyacinthe where he studied the molecular epidemiology and the control of food-borne and water-borne pathogens. In 1999, he accepted a position as professor at the Faculty of Veterinary Medicine of the University of Montreal. He is currently responsible for a research chair in meat safety where he supervises the work of many graduate students working on the genetic characterization and epidemiology of food-borne and environmental pathogens. He acted as scientific counsellor for many governmental, professional or producer organizations in the development of policies, of on-farm HACCP-based models, or in risk analysis. He is recognized as an expert in microbial risk assessment by the World Health Organization. He published and presented numerous scientific papers on the molecular epidemiology, pathogenesis and control of pathogens such as *Salmonella, Yersinia, Cryptosporidium* and *Campylobacter*.

Bill Rannells, D.V.M., is an independent Contractor, Cook and Thurber, Ann Arbor, Michigan. Former Industry QA Manager and USDA Cooperative State-FSIS official.

Robin Williams, M.D., is the Medical Officer of Health for the Niagara Region and a Clinical Professor at McMaster University. Apart from being responsible for general public health programs including water and food safety, Dr. Williams and her staff were involved in an *E. coli* 0157:H7 food-borne investigation in Regional Niagara in the spring of 1998 involving 39 patients. This was subsequently sourced to Genoa salami and the case control study was published in the Canada Medical Association Journal.

Peter Willmott, MES, CPHI(c), is currently the Director, Health Protection Services, with the Halton Region Health Department, Oakville, Ontario, a position he has held since 1985. Prior to that time, he was employed by the Ontario Ministry of Health for 12 years in a variety of positions, including Chief of the Provincial Public Health Inspection Service and Co-ordinator of Public Health Legislation. In this latter capacity, he was one of the principal authors of the *Health Protection & Promotion Act*. From 1983-1995, Mr. Willmott taught environmental health management in the School of Occupational & Public Health, Ryerson University. Mr. Willmott's current portfolio includes responsibility for the Health Department's Communicable Disease Control and Food Safety Programs. His current interests in food safety include membership in the Canadian Food Inspection System Implementation Group and the Ontario Food Safety System Implementation Committee. Mr. Willmott trained as a public health inspection in the UK and Canada. His UK qualifications include certification as a meat inspector.

He is a graduate of the School of Business & Economics, Wilfred Laurier University and holds a Master's Degree in Environmental Studies from York University. He is currently completing a PHD in Food Safety Policy from the University of Lincoln (UK).

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